UNIVERSAL CATALOG 2015A

$2.00

universal radio inc.

COMMUNICATIONS CATALOG 2015A

By Fred Osterman. This huge 800 page hard cover Fourth Edition includes over 1700 shortwave and amateur communications receivers (plus 1200 variants) made from 1942 to 2013. Here is everything you need to know as a radio collector or informed receiver buyer. Information includes: receiver type, date sold, photograph, size & weight, features, reviews, specifications, values (most), variants, rating and availability. 360 worldwide manufacturers with 1800 photos. Become an instant receiver expert!
2014 Fourth Ed. **$49.95** ($6.95 shipping).

New expanded Fourth Edition now shipping!

Reader comments on the Fourth Edition . . .

My hat is off to you my friend, and the tremendous endeavor that you took on and succeeded in completing in such a marvelous fashion.
- Les Locklear

It's a book that in one place wraps up more information about an era than any 20 people could bring to the table. - Avery Comarow W3AVE

Amazing work. - Mario Stutterheim KD2BXA

The SWL community thanks you for providing us this great reference to the equipment we love.
- Tom Marcotte N5OFF

This 4th edition is simply a masterpiece which will provide many hours of interesting reading in addition to immediately becoming recognized as the most authoritative reference on the subject. Thanks for this wonderful contribution to our hobby. - Robert Baumann

It's a fine book, greatly expanded, and I'm going through it slowly. I didn't know there were that many receivers made that I haven't heard of.
- John Reed KA5QEP

Just received a copy of the latest edition of "Receivers Past and Present." All I can say is WOW. - Paul Katz W5NTQ

The definitive reference in short wave receivers.
- Bertrand Velle

Absolutely fabulous. - Dale Parfitt W4OP

A true work of art. - John Wagner

Wow! Best reference book on Shortwave/HF receivers ever published anywhere. - David Whiting

The book is INCREDIBLE! Wow -- I'm having so much fun digging through all of these receivers!
- Thomas Witherspoon

The book is amazing! - Tom Taylor N7TM

A wonderful book. It impressed me.
- Hideo Kanemichi

Fine job ! Many memories with those old receivers. - Hervé Brien F6CZL

A truly remarkable compilation of so many receivers. - Peter Markavage

A magisterial tome. It is absolutely excellent and anyone half interested in receivers MUST go and spend his pennies and buy it.
- Michael O'Beirne G8MOB

A really monumental work. The hardcover is very welcome for this robust "RX Bible"!!! Congrats on including many manufacturers that I never heard of. - Joerg Klingenfuss

I am super impressed with the 4th edition, especially regarding the history of the manufacturers.
- John F. Clemens WØBD

Amazing how heavy and well printed the luxury book is. - Serge Matveyev UA1OSM

The book has certainly become the go-to reference for data on any vintage or modern communications receiver.
- Kevin Carey WB2QMY

An amazing piece of work. A classic reference book has become even better.
- Karl-Arne Markstrom SMØAOM

This book will be a treasure of a lifetime.
- Minamoto Junichi JA1VHZ

I was amazed by the number of different manufactures and models of receivers in the book. I had no idea. - Tom Vilov W3FLC

AMAZING! I believe this is the right word for the book. It's an encyclopedia! - Vincenzo Italia

It deserves to be on every bookcase.
- David Knepper W3CRA/W3ST

What a monumental reference work. It exceeds my expectations, and probably everybody else's too. There is so much new material, that it is almost a completely new work.
- Clemens Stubbe Østergaard

Universal Radio - Prices & Special Offers

ALINCO

Alinco promotion ends 12/31/15

Order	Model	Regular	Comment	Price	Pg.
#1656	DJ-500T	$129.95	New 2M/440 HT	$129.95	74
#1007	DJ-G7T	269.95		269.95	74
#0117	DJ-V17T	119.95		109.98	74
#3077	DJ-X 7T	189.95		189.95	23
#4011	DJ-X11T	319.95		319.95	23
#1980	DR-135TMkIII	169.95		169.95	68
#2635	DR-635T	319.95		319.95	68
#0638	DR-638T	359.95	New 2M/440 Mobile	359.95	68
#4185	DR-B185T	169.95	New 2M 85W Mobile	169.95	—
#0084	DX-R8T	449.95	Joe Carr Loop Book #0016	449.95	14
#5008	DX-SR8T	519.95		519.95	61
#0190	DX-SR9T	719.95		719.95	61

AOR

Order	Model	Regular	Comment	Price	Pg.
#5001	AR5001DB	$4299.95	Free UPS	$4299.95	22
#0083	AR8200Mk3B	719.95		719.95	21
#1860	AR8600Mk2B	959.95		959.95	21
#6369	AR-DV1B	1194.95	New wideband rx. Free UPS	1194.95	—
#0202	AR-miniB	259.95	Pocket sized wideband rx.	159.95	—

BEARCAT-UNIDEN

Order	Model	Regular	Comment	Price	Pg.
#2346	BC346XTC	229.98	(No AA cells)	$229.98	24
#4325	BCD325P2	399.95	New *APCO25 Phase I/II*	399.95	—
#0436	BCD436HP	499.95	New	499.95	25
#4536	BCD536HP	569.95		569.95	25
#4996	BCD996P2	449.95	New *APCO25 Phase I/II*	449.95	—
#0015	BCT15X	179.95		179.95	25
#0738	HomePatrol I	399.95		399.95	25
#6420	HomePatrol II	499.95	With *APCO25 Phase I/II*	499.95	25

C CRANE

C Crane promotion ends 12/31/15

Order	Model	Regular	Comment	Price	Pg.
#3682	CC Radio2BE	$159.95	Free *Discover DXing* #0009	$159.95	33
#6155	CC Radio2TE	159.95	Free *Discover DXing* #0009	159.95	33
#0034	CC Skywave	89.95	New AM/FM/SW/Air/WX	89.95	
#2678	CC CSW	139.95	AM/FM/SW	139.95	12

COMM RADIO

Promotion ends 10/31/15

Order	Model	Regular	Comment	Price	Pg.
#2002	CR1a	$599.95	Free Go-Bag & Free UPS	$599.95	13

GRUNDIG - ETON

Grundig promotion ends 10/31/15

Order	Model	Regular	Comment	Price	Pg.
#0018	Field	$129.95	Free G2 Reporter radio	$129.95	6
#5002	G 2 Reporter	119.98	Special Sale!	59.98	6
#0154	Mini	39.95	Free AN-200 AM antenna	39.95	6
#0050	Satellit	199.95	Free G2 Reporter radio	199.95	6
#0750	Satellit 750	349.95		349.95	5
#6003	Traveller III	59.95	Free AN-200 AM antenna	59.95	6

KAITO - TECSUN

Kaito promotion ends 12/31/15

Order	Model	Regular	Comment	Price	Pg.
#5012	KA12AIR	$44.95	FM/VHF-AIR	$44.95	24
#5804	KA600 GRN	79.95	Free *Discover DXing* #0009	79.95	9
#1103	KA1103 BLK	79.95		79.99	8
#5814	PL-606 BLK	59.95		59.95	10
#3681	PL-360 BLK	59.95		59.95	10
#5902	PL-380 SIL	59.95		59.95	10
#5594	PL-390	64.95		64.95	11
#4398	PL-398BT	79.95		79.95	11
#1398	PL-398MP	69.95		69.95	11
#2600	PL-600	89.95		89.95	10
#5903	PL-660 BLK	109.95		109.95	10
#2540	PL-660 SIL	109.95		109.95	10
#0088	PL-880 BLK	159.95	New model	159.95	11
#0388	PL-880 SIL	159.95	New model	159.95	11

KENWOOD

Kenwood promotion ends 12/31/15

Order	Model	Regular	Comment	Price	Pg.
#3072	TH-D72A	$449.95	Free HT Go-Bag	$449.95	69
#3020	TH-K20A	139.95	Free HT Go-Bag	139.95	69
#0066	TH-F6A	314.95	Free HT Go-Bag	314.95	69
#0281	TM-281A	169.95	$20 Coupon	149.95	64
#0309	TM-D710GA	679.95	$40 Coupon +Free UPS	639.95	*64*
#0071	TM-V71A	379.95	$15 Coupon	364.95	64
#0480	TS-480SAT	1224.95	$250 Coupon+Free UPS	974.95	63
#2480	TS-480HX	1349.95	$250 Coupon+Free UPS	1099.95	63
#1590	TS-590SG	1759.00	$150 Coupon+Free UPS	1609.00	62
#3990	TS-990S	7999.95	$600 Coupon+Free UPS	7399.95	62
#1978	TS-2000	1689.95	$200 Coupon+Free UPS	1489.95	63
#2797	TS-2000X	2249.95	$250 Coupon+Free UPS	1999.95	63

ICOM

Icom promotion ends 12/31/15

Order	Model	Regular	Comment	Price	Pg.
#3702	AH-4	299.95	$50 Coupon	$249.95	65
#2715	AH-710	319.95	$20 Coupon	299.95	65
#3438	AT-180	499.95	$50 Coupon	449.95	65
#0718	IC-718	674.95	$75 Coupon	599.95	58
#5023	IC-2300H	189.95	$20 Coupon	169.95	65
#2730	IC-2730A	339.95	New 2m/440 Mobile	339.95	—
#3071	IC-7100	1504.95	$400 Coupon+Free UPS	1104.95	59
#0026	IC-7200	999.95	$200 Coupon	799.95	58
#0173	IC-7300[1]		New HF+6m Transceiver		—
#0748	IC-7410	1574.95	$175 Coupon+Free UPS	1399.95	58
#0076	IC-7600	3424.95	$375 Coupon+Free UPS	3049.95	58
#0277	IC-7700	7179.95	$900 Coupon+Jacket+Free UPS	6279.95	59
#4557	IC-7851	14,449.00	Free Icom Mat (24x35")	14,449.00	—
#5091	IC-9100	2899.95	$400 Coupon	2499.95	58
#2925	IC-PW1	5149.95		5149.95	102
#2006	IC-R 6-*Sport*-16	189.95	$15 Coupon+Free Go-Bag	174.95	18
#0012	IC-R75-22	679.95	$50 Coupon+Loop Ant.Book	629.95	14
#0095	IC-R9500-02	12899.00	Free UPS	12899.00	19
#4070	IC-T70A HD	199.95	Free Go-Bag	199.95	70
#0580	IC-V80 *Sport*	99.95	Free Go-Bag	99.95	70
#0280	IC-V80 *HD*	149.95	Free Go-Bag	149.95	70
#4080	IC-V8000	218.98		218.98	65
#0337	ID-1	704.95	$25 Coupon	679.95	65
#2031	ID-31A	309.95	$10 Coupon+Free Go-Bag	299.95	70
	ID-51A *50th Aniv*	409.95	*50th Anniversary* +Free Go-Bag	409.95	70
#3051	ID-51A *Plus*	419.95	New version. Free Go-Bag	419.95	70
#0880	ID-880H	419.95		419.95	65
#0510	ID-5100ADLX	629.95	$50 Coupon with MBA-2!	579.95	—

universal radio inc.

Universal Radio, Inc.
6830 Americana Pkwy.
Reynoldsburg, Ohio 43068
☎ 800 431-3939 Orders & Prices
☎ 614 866-4267 Information
614 866-2339 FAX Line
dx@universal-radio.com

www.RFfun.com
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HUGE FREE CATALOG

The huge 132 page ***2015 Universal Radio Catalog*** covers everything for the shortwave and amateur enthusiasts. Request your free copy today!

- **Prices and promos are subject to change!**
- Free items require purchase of indicated radio.
- Mfg. supply some free items directly.
- Coupon applied after state sales tax if any.
- Promotions may be extended or cancelled.
- Returns subject to a 15% restocking fee.
- Used equipment list available on request.
- Visa • Mastercard • Discover • JCB

80 p65

Universal Radio ... Quality Equipment Since 1942.

[1]This device has not been approved by the F.C.C. This device may not be offered for sale or lease or be sold or leased until approval of the F.C.C. has been obtained.

Universal Radio - Prices & Special Offers

SANGEAN

Sangean promotion ends 12/31/15

Order	Model	Regular	Comment	Price	Pg.
#4405	ATS-405	$89.95	New AM/SW/FM	$89.95	—
#3505	ATS-505P	$119.95		$119.95	7
#2909	ATS-909X	249.95		249.95	7
#4909	ATS-909XBK	249.95	New black version	249.95	7
#0068	PR-D5	79.95	Free *Discover DXing* #0009	79.95	30
#0211	PR-D7	69.95	Free *Discover DXing* #0009	69.95	30
#2015	PR-D15	89.95	Free *Discover DXing* #0009	89.95	30
#4113	RCR-9	74.95	New AM/FM	74.95	—
#4028	WFR-28	139.95	New WiFi/FM portable	139.95	28
#3281	WR-2 Walnut	129.95	Free *FM Atlas* #2329	129.95	32
#3282	WR-2 Black	129.95	Free *FM Atlas* #2329	129.95	32
#4015	WR-15 WAL	99.95	New AM/FM	99.95	—

TDXONE

TDXone promotion ends 12/31/15

Order	Model	Regular	Comment	Price	Pg.
#6008	TD-Q8A	$59.95	Free Speaker Mic	$59.95	71

WHISTLER

Order	Model	Regular	Comment	Price	Pg.
#1040	WS1040	$399.95	Sale!	$339.95	27
#1065	WS1065	399.95		399.95	27
#5020	WS1025	99.95		99.95	27
#6080	WS1080	499.95		479.95	27
#6088	WS1088[1]		Expected November		—
#1095	WS1095	489.95	New model	489.95	27
#1098	WS1098[1]		Expected November		—

WOUXUN

Order	Model	Regular	Comment	Price	Pg.
#5003	KG-UV3D	119.95		$119.95	75
#3006	KG-UV6Dv2	159.95		159.95	75

YAESU

Yaesu promotion ends 12/31/15

Order	Model	Regular	Comment	Price	Pg.
#4762	DMU-2000	$1199.95	$400 Rebate	$799.95	62
#0112	FT-1DRB	309.95	Free HT Go-Bag	309.95	73
#6002	FT-2DR	549.95	$100 Rebate +Free Bag	449.95	—
#0060	FT-60R	152.95	Free HT Go-Bag	152.95	72
#0252	FT-252	73.98	Free HT Go-Bag	73.98	72
#1257	FT-257	74.95	Free HT Go-Bag	74.95	72
#5270	FT-270R	144.95	$20 Coupon+HT Go-Bag	124.95	72
#5277	FT-277R	149.95	Free HT Go-Bag	149.95	72
#0452	FT-450D	749.95	$100 Rebate	649.95	60
#1817	FT-817ND	689.95	$60 Rebate +Free Bag	629.95	60
#1857	FT-857D	849.95	$50 Rebate +YSK857	799.95	60
#3991	FT-991	1599.95	$100 Rebate+Free UPS	1499.95	60
#1900	FT-1900R	139.95	Pocket Knife	139.95	67
#2900	FT-2900R	159.95	$20 Coupon+Pocket Knife	139.95	67
#0790	FT-7900R	309.95	Includes YSK7800+Knife	309.95	67
#0080	FT-8800R	379.95	YSK8900+Knife	379.95	67
#0890	FT-8900R	389.95	YSK8900+Knife	389.95	67
#1200	FTDX1200	1399.95	$300 Rebate+Free UPS	1099.95	60
#3000	FTDX3000	2299.95	$300 Rebate+Free UPS	1999.95	60
#6279	FTDX5000LTD	5399.95	Free UPS	5399.95	61
#0100	FTM-100DR	399.95	$60 Rebate +Free Cap	339.95	—
#5400	FTM-400DR	599.95	$100 Rebate +Free Cap	499.95	67
#3641	VL1000	4399.95	Free UPS	4399.95	102
#3003	VX-3R	139.95	$20 Coupon+HT Go-Bag	119.95	72
#0666	VX-6R BLACK	229.95	Free HT Go-Bag	229.95	72
#1608	VX-8DR	339.95	Free HT Go-Bag	339.95	73

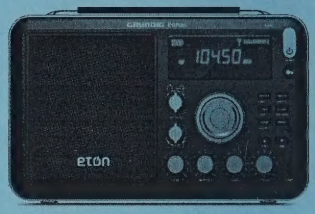
NOTICE: Customer must apply to manufacturer for rebates.

Celebrate 70 years of Grundig radio quality with this very special offer ...
A FREE Grundig G2 Reporter with purchase of Grundig Satellit or Field!

FREE **G2**

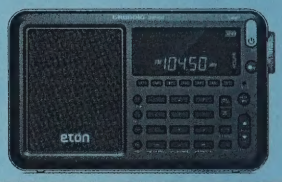
The sleek **Grundig G2** ***Reporter*** receives AM, FM and SW 2.3-23 MHz with dual speakers, 243 memories, built-in MP3/WAV recording system. Was $149.95 in our 2014 Catalog. USB charging source required. This radio will be included ***FREE*** with your purchase of the Field, Satellit or Satellit 750.

FIELD



The **FIELD** receives AM, FM and SW 1.7-30 MHz with 50 memories, bass, treble, FM stereo with RDS, wide/narrow bandwdith, dual tune speeds and includes AC adapter. **$129.95**

SATELLIT

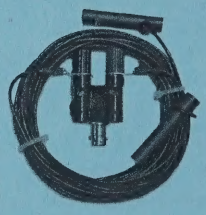


The latest member of the 50 year **SATELLIT** tradition covers LW, AM, FM stereo, all SW *plus the* VHF air band. SSB, 700 alpha memories and includes AC adapter. *#0050* **$199.95**

HY POWER

NEW!

QRP MICRO DIPOLES



Hy Power QRP *Micro* Dipoles are ready to hit the trail with you. These are full length dipoles, but are constructed to fit in your pocket! The center connection is a banana jack to **BNC** adaptor. The compact end insulators are made from 3/8" round fiberglass. These antennas are not meant to be used in a permanent installation. Absolutely great for back packers. They can handle up to 250 watts. FSDP15QM shown.

Model	Type	Feet	Order#	Price
FSDP40QM	40M Fullsized	70	*#6544*	$41.95
FSDP30QM	30M Fullsized	48	*#6545*	37.95
FSDP20QM	20M Fullsized	35	*#6546*	34.95
FSDP17QM	17M Fullsized	26	*#6547*	33.95
FSDP15QM	15M Fullsized	23	*#6548*	32.95
FSDP12QM	12M Fullsized	20	*#6549*	31.95
FSDP10QM	10M Fullsized	17	*#6550*	29.95
FSDP 6QM	6M Fullsized	10	*#6551*	28.95

NANO USB

The **Hardened Power Systems Nano USB** drivers gives you 3 amps of USB power output from 6-26 VDC PowerPole® input. In four colors.

BK Black	*Order #6530*	$19.95
RD Red	*Order #6531*	$19.95
YE Yellow	*Order #6532*	$19.95
GR Gray	*Order #6533*	$19.95

UNIVERSAL BUYS RADIOS

Call, email or write and tell us what you have to sell. We can provide a quote, subject to inspection.

universal radio inc.

Universal Radio, Inc.
6830 Americana Pkwy.
Reynoldsburg, Ohio 43068
800 431-3939 Orders & Prices
614 866-4267 Information
614 866-2339 FAX Line
dx@universal-radio.com

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INTRODUCTION TO UNIVERSAL

Universal was founded in 1942 by F.R. "Gibby" Gibb W8IJ. Universal Service, as it was then called, was located on North Third Street in downtown Columbus, Ohio. Universal carried all the major lines of the time including Millen, Drake, Collins, Hammarlund, Hallicrafters, Johnson and National. Most of the brands have changed, and so has our location. But the same dedication to customer service and satisfaction that our company was founded upon over sixty years ago, still remains. As one of the oldest retail radio stores in the country, we are grateful for the support provided to us by the radio community over these many decades. We will continue to offer the finest in new and used communications equipment at competitive prices. This catalog has been designed to introduce you to the newest and best in communications equipment. As you get to know us, we think you will want to become one of our valued customers.

FACTORY DIRECT DISTRIBUTOR

Universal Radio is a direct authorized distributor for all the major communications lines. We can therefore give you objective advice on all brands of equipment.

ESTABLISHED OVER 70 YEARS

Universal has been serving the amateur and listening community since 1942. You can be assured that we will be here in the future for support and service.

SHOWROOM DISPLAY

Universal is one of only a few stores in the country with a fully stocked showroom. Our 10,000 square foot facility is open six days a week and features an exceptional selection of communications equipment for the ham and SWL. Every major piece of equipment is on display and operational! If you travel through Central Ohio, please stop in and listen to our excellent selection of communications products. We are only 20 minutes from downtown Columbus or the airport.

LOW PRICES

You will find our prices very competitive and we do not add a surcharge to your order if you are using a credit card. Since we do buy direct from the manufacturers, we can offer you favorable prices.

MORE INFORMATION

We at Universal think an informed customer is a satisfied customer. We want to provide you with all the information you need to make your next communications purchase. This catalog is a first step towards this goal. We have specification sheets on most large items and will send them to you upon request. A great deal more technical information and full color photos of our products are available at our website:

www.universal-radio.com

You can also reach this same website by typing:

www.RFfun.com

USED EQUIPMENT

Universal offers a fine selection of used equipment for the communications enthusiast. Every piece of used equipment that we take in is thoroughly tested before being released for resale. All our used equipment carries a sixty day parts and labor limited warranty (unless specifically stated otherwise). Whether you are a new hobbyist on a budget, or an advanced DXer looking for a "standby" set; check our inventory of used gear! We publish a complete list of used equipment every month! To get your copy send a self-addressed stamped envelope. Our used equipment list is also posted on our website twice weekly:

www.universal-radio.com

Universal Radio has recently added a Used Equipment Sold Archive. This resource provides technical information, and valuations for many older radios and accessories.

TRADE-INS

Yes, we do take trade-ins! If you would like to trade your present gear in for a new unit or even another piece of used gear, let us know. Please contact us indicating what you wish to trade-in. Indicate the condition of the equipment and whether you have the box, manual, etc. We also buy clean used amateur and shortwave radio equipment.

LAY-AWAY

Universal offers a convenient layaway plan. To place any new item in layaway for up to sixty days, a 33% deposit is required. 33% more is required at 30 days. The balance is required at 60 days (or sooner). The item will be shipped after full payment. There are no service or interest charges.

FULL SERVICE

Universal offers a selection of receivers second to none. Upon request, we will inspect and test any radio prior to shipment at no extra charge. We are interested in you whether you need an 89¢ plug or a $4000.00 receiver.

Front Cover: QSLs courtesy of William A. Matthews

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Mail: **Universal Radio Inc.**
6830 Americana Parkway
Reynoldsburg, OH 43068-4113

Phone: **800 431-3939** Orders & Prices
614 866-4267 Technical Info.

FAX: **614 866-2339**

E-mail: **dx@universal-radio.com**

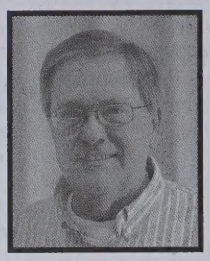
Web: **www.universal-radio.com**

UNIVERSAL STAFF

Barbara *V. President* KC8VWI

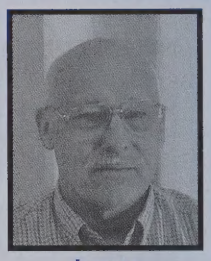
Fred *President* N8EKU

Eric *Store Mgr.* KC8VWL

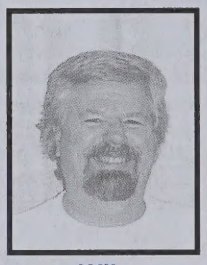


Craig *Sales* WB2FVE

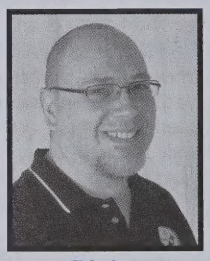
John *Sales* W8JTC



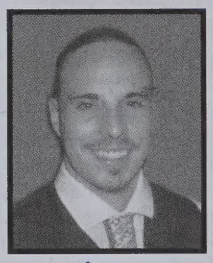
Larry *Sales* K8BBQ



Wil *Sales* W8WB



Rick *Office* W8NRK

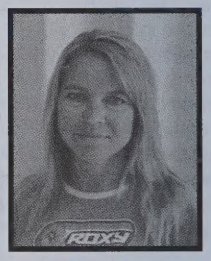


Ian *Office* KD8QZC

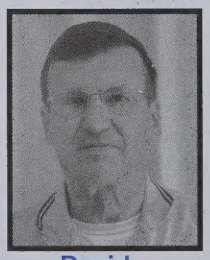
Julie *Receiving*

Brandy *Shipping*

Cathy *Shipping*

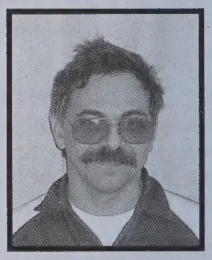


Sarah *Shipping*



David *Service* WA8EUT

Sean *Service* KB8JNE



Toni *Service* KC8ASF

UNIVERSAL OFFICE CATS

I am getting braver every day. **Bindhi**

I am happy to help you eat your lunch. **Celia**

I love your chair. **Smudge**

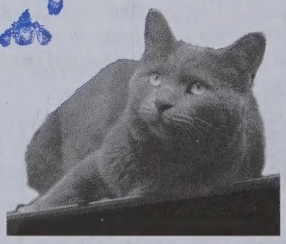
Now friendly, not feral **Annie**

Smudge is my pal **Smidgen**

I am the most charming guy at Universal. **Grayson**

I am the supreme ruler of the warehouse. **Boomer**

I am a sun worshipper. **Celeste**



I am now living large at Universal. **Pewter**

Visit **www.universal-radio.com** for more Universal and customer cats.

EVENTS AT UNIVERSAL

Visit the Universal website for upcoming events.

www.universal-radio.com

Typically the QRP group meets on the first Saturday, the SWL group on the second Saturday and QCWA on the third Saturday. Ham testing, commercial testing, amateur classes and free seminars are also provided throughout the year. See ***Events*** on our website for exact dates and times.

UNIVERSAL RADIO COMPANY POLICIES

- **PAYMENT:** We accept Visa, Mastercard, Discover, money orders, cashiers checks and personal checks. Phone order customers please be ready to provide card number, expiration, issuing bank, billing and shipping address plus home & work phone. We request this information for your protection. Personal checks and money orders require time to clear from unestablished customers and/or for large purchases.
- **MINIMUM ORDER:** We have no minimum. Your order is important to us whether it is for $5 or $500.
- **SHIPPING:** We ship most in-stock items within 48 hours (UPS Next Day and Second Day Air orders are shipped within 24 hours). Our normal method of shipment is UPS surface. For books or small orders under $50 we may ship postal. We do not ship C.O.D. We ship Monday through Friday. You may request shipment by other means such as UPS Next Day Air, UPS Second Day Air or Air Freight for export orders. Equipment is packed very carefully and sent insured. Please provide us with a full shipping address. UPS cannot ship to a Post Office box. Flatrate shipping amounts are for the continental U.S.A. only. We can provide shipping quotes for international customers.
- **PRICES:** **Prices and specifications are subject to change!** Prices shown are accurate at printing time. We are not responsible for typographical errors. We suggest you call to confirm prices on larger items. Please call toll free: 800 431-3939. For technical questions please call: 614 866-4267.
- **WARRANTY SERVICE:** Our service department is authorized to perform warranty work on Kenwood, Icom, Yaesu and JRC. However, we do **not** perform repairs for all radios. Copy of receipt must accompany returns for warranty repair. Please call or email before sending in any item for service.
- **ALL REPAIRS:** **Please contact Universal for a service authorization number prior** to shipping your service item. When sending in a product for service, please "double" box it carefully and ship it insured for your protection. Please include a note clearly describing the problem, how you wish the item returned and how you wish to pay for the service. Package your radio properly. Universal is not responsible for merchandise damaged in shipment. Our service rate is $60 per hour (½ hr. minimum).
- **BACK ORDERS:** Universal carries an extensive inventory to minimize "back ordered" items. Because of manufacturer shortages, backorders do occasionally occur. You may cancel any backordered item at any time for any reason and receive a prompt and full refund. On credit card orders we will not bill your card until we actually ship.
- **RETURNS:** Returned items must be received by us in original, as shipped, condition including the original box, manuals, accessories, copy of sales receipt and warranty card. Note: Do not send in the warranty card until after 10 days, and you are certain that the product will suit your needs. Returns must be within **14 days** of purchase. Returned items are subject to a 15% restocking fee. Please contact us for a return authorization number. Shipping is not refundable. Outdoor antennas, rotors, headphones, software and custom cables are not refundable.
- **FOREIGN ORDERS:** Foreign orders must be payable in U.S. dollars. You may use Visa, Mastercard, Discover card, postal money order or bank check drawn on a U.S. bank with imprinted transit numbers. Catalog shipping amounts are for the U.S. only. We can provide shipping quotes. We typically sell the North American version of radios and most are *not* CE approved. Most manufacturer's warranties are **not** valid outside the U.S. The customer is responsible for any import duties, customs charges and destination fees. Universal Radio is currently exporting only to Canada and/or established customers. The exception is books which ship worldwide. Please email for details.
- **DAMAGED SHIPMENTS:** If you receive a damaged parcel from UPS, note this with the driver and refuse the shipment. It will be returned to Universal and we will replace it for you at no additional cost.
- **COUPONS:** Many amateur manufacturers run "instand" coupon promotions. You do ***not*** need the physical coupon in most cases. Contact Universal to see what coupons are currently available.

TO PLACE AN ORDER:

Phone: **800 431-3939 Orders & Prices**
614 866-4267 Technical Info.
We accept phone orders Monday through Friday from 9:30 A.M. to 5:30 P.M. Eastern Saturday from 9:30 A.M. to 3 P.M. Eastern

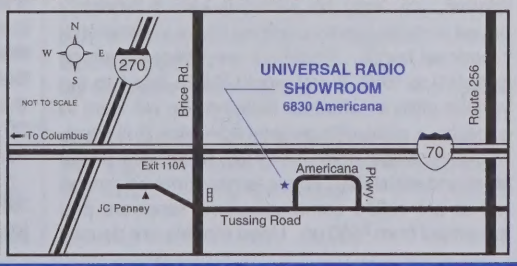
Mail to:

Universal Radio
6830 Americana Pkwy.
Reynoldsburg, OH 43068-4113

FAX: **614 866-2339 24 Hour FAX**
E-mail: **dx@universal-radio.com**

SHOWROOM HOURS:

Sun	Mon	Tue	Wed	Thr	Fri	Sat
Closed	10-5:30	10-5:30	10-5:30	10-5:30	10-5:30	10-3:00



FLAT RATE SHIPPING

Our simplified flat rate shipping for U.S.A. customers (except AK, HI, PR) is:

Up to $50.00	$6.95
$50.01 to $100.00	$8.95
$100.01 to $500.00	$9.95
$500.01 to $1000.00	$14.95

Flat-rate charges are based on the total order of the initial shipment. The order total is pre-coupon and pre-tax. The flat-rate charges include adequate insurance. Call for orders over $1000.

USED LIST

To receive our monthly list of used equipment please send us one or more **self-addressed stamped envelopes.** Our used gear is checked in our service shop and carries a 60 day limited warranty. Our used list may also be viewed at:

www.universal-radio.com

PURCHASE

If you have equipment you are not using, why not turn it into cash? Universal will purchase good clean used equipment. Please write us, and let us know what you have to sell.

"DEMO" SALE

Universal will not sell returned or demonstrator units as new! From time to time we have such items and can usually offer them at up to 20% off our regular price. Please call to check availability.

TRADE-INS

For trade-in quotes, please call or write us listing the items you wish to trade including any optional accessories. Indicate condition and whether you still have the original box and manual. Universal will accept trade-ins towards: new, used, higher or lower value equipment. We accept trade-ins from within the U.S.A. only. Please allow seven days for the trade-in evaluation.

SHIPPING TO UNIVERSAL

Please contact Universal for an authorization number **prior** to shipping your service, return, purchase or trade-in item. When you ship your equipment it is important that it is packaged properly. Use the original box and packing material if possible. If you do not have the original box, wrap the equipment well with bubble wrap then place this in a box with adequate packing material. All equipment should then be placed in a **second box** with packing material to help ensure its safe arrival to us. Be sure to insure your package for its value. Universal Radio will not be responsible for equipment that is damaged in shipment.

GIFT CERTIFICATES

Gift certificates are available in any amount. When ordering a gift certificate indicate *your* name and address **plus** the recipient's name & address.

Visit us on the web:
www.universal-radio.com

INTRODUCTION TO SHORTWAVE

Listening to shortwave, or *world band*, radio is an exciting and educational form of entertainment. With a moderate investment, anyone can listen to a variety of broadcasts from around the world.

WHAT IS SHORTWAVE RADIO?

The standard AM broadcast radio band extends from 540 to 1700 kHz. Shortwave radio starts where the standard AM band ends and extends to 30000 kHz or 30 MHz (1000 kHz = 1 MHz). Unlike medium wave signals, shortwave signals will reflect (refract) off the invisible layer above the earth called the ionosphere. While worldwide shortwave reception can occur during the day, best reception is usually during the evening.

WHAT CAN I HEAR?

The shortwave spectrum is vast. There are potentially thousands of stations that can be heard. The major types of stations are:

International Broadcast Stations

Every major country in the world, as well as many small countries, have English transmissions that can be heard in North America. These English broadcasts can be anywhere from 1/2 hour to several hours in length. Many countries beam their transmissions directly to North America to enhance reception for Canadian and American listeners. Some of the easier English broadcasts to hear come from:

BBC London	Voice of Russia
Radio Argentina	Voice of America
Radio Japan	China Radio Intl.
Vatican Radio	Voice of Vietnam
Radio Romania	Radio Australia
Radio Nigeria	Korean Brdcst. Sys.
Radio Thailand	Radio Havana
Voice of Korea	Voice of Turkey
Radio Ukraine	DW-Voice of Germany
Radio Cairo	Radio New Zealand
Channel Africa	Radio Taiwan Intl.

These and other stations design their programs for international audiences. There are also a number of regional and local shortwave stations that broadcast to their native populations. These lower powered stations typically transmit in the local language. A variety of interesting programming and music can be heard from these stations, especially from South America, Africa and the Pacific. Non-English broadcasts are also a great way to keep your foreign language skills sharp.

Radio Amateur Stations (Hams)

There are over 2,000,000 licensed amateur radio operators all over the world. Listening to hams can be interesting and a good way to learn more about ham radio. Hams are assigned to a different set of frequencies than the international broadcasters. If you want to listen to amateur stations, you will need a "general coverage" receiver. In order to transmit greater distances and efficiently use their allocated frequencies, hams transmit in a special voice mode called single sideband (SSB) and also Morse code. Again, it is important to select a radio capable of receiving these modes. Our staff will direct you to radios best suited for this.

Citizen Band (CB)

CB stations can be heard on most general coverage receivers. CB transmissions can be found between 26 and 28 MHz.

Utility Stations

If you subtract from the shortwave spectrum all the international broadcasters, ham and CB stations, you will be left with a large number of stations loosely labeled "utility stations." These are commercial, government, military and research stations whose transmissions are not designed for general audiences. Some types of utility stations:

International Aeronautical

International commercial aircraft communicate with distant air centers using shortwave radio. It would not be surprising to hear an AirFrance jet talking to Santiago Control, or a JapanAir flight working Anchorage Control. We are fortunate that the international aeronautical language is English!

Maritime Stations

Shortwave radio remains a secondary link between ships at sea and land. There are hundreds of coastal stations and a great many ships which can be monitored on a shortwave radio capable of SSB and Morse reception. Listening to ship-to-shore channels and distress frequencies can be particularly interesting.

Military Stations

While "sensitive" military traffic is sent via satellites or encrypted, numerous military transmissions can be heard and identified. The following navies can easily be heard with a communications receiver: American, French, South African, British, Argentine and New Zealand.

Time Stations

Many countries have stations which send out very precise time transmissions. Most include voice identifications and many can be heard in the USA.

Miscellaneous

There remain a number of stations that do not fall neatly into the previous categories. Illegal "bootleg" stations can be heard from time to time. Africa and Asia host several "clandestine" stations run by various rebel factions. They can be heard in the U.S. when they are not being jammed. There are a number of stations which transmit series of numbers without identification. While they are easy to hear, no one has conclusively determined their intent. Even some Soviet and American satellites in low orbit can be monitored.

WHAT KIND OF EQUIPMENT DO I NEED?

The answer depends on what you want to hear. If the international broadcast stations are your main interest, you may be satisfied with a modestly priced portable model covering these international broadcast bands. Portables are generally priced from $50 to $500. If you would like to listen to the various utility or amateur stations you will want to consider a radio with general coverage (full shortwave coverage from 1.7 to 30 MHz) and single sideband capability. These larger, more advanced radios are called communications receivers and are priced from $500 up. Used models are usually in stock at Universal, and can afford a considerable savings. Contact us for a copy of our used list.

WHAT DO I USE FOR AN ANTENNA?

Good shortwave reception is possible with a very modest antenna. Portables include a whip antenna which will work quite well. Many portables and all communications receivers provide an external antenna jack (or terminal). Many listeners simply attach a 20 to 40 foot length of regular insulated wire to this jack and then stretch it across the room. This will yield surprisingly good results. However, if you can string the wire outdoors to a tree or pole, still better reception will result. Universal can provide the wire, insulators, *Coax-Seal* and lead-in cable for your antenna. Other specialized antennas are also available.

> ***Caution:*** *Avoid overhead utility lines when stringing outdoor antennas. Contact with overhead lines can cause electrocution. Outdoor antennas should be grounded to help prevent lightning damage. If you are new to antenna construction please request a free copy of our "Antenna Safety Advisory".*

HOW DO I KNOW WHERE TO TUNE?

One of the most exciting aspects of shortwave listening is simply tuning the dial and discovering stations from all ends of the earth. However, there are times when you will want to tune a particular country, perhaps because of an important event occurring there. An excellent book for the shortwave listener is the *World Radio TV Handbook.* This annual publication will guide you to the proper frequency. If you want to hear the exciting "utility" stations, the book *Guide to Utility Stations* is a "must." The North American Shortwave Association produces an excellent monthly bulletin for shortwave broadcast listeners and DXers called the *NASWA Journal.* Visit their website to learn about subscribing to this excellent publication:

www.naswa.net

WHAT IS U.T.C. or G.M.T. TIME?

In order to avoid the confusion of many time zones, hams and international broadcasters always refer to time at the zero meridian (which runs through Greenwich, England). This time zone is five hours ahead of Eastern Standard Time (4 hours ahead of Eastern Daylight Time). This 24 hour format is referred to as Coordinated Universal Time (UTC). For example 4:00 P.M. EST = 21:00 UTC.

WHAT IS THIS I HEAR ABOUT "QSLs"?

Most international broadcast stations like to hear from their listeners. If you send a "reception report" to a foreign broadcast station they will send you a confirmation of your reception in the form of a postcard called a "QSL". They also will usually send you a program guide and information about their country. A reception report should include the date and time you heard the station (in UTC), the frequency heard, reception quality and 15 to 30 minutes of program content to validate reception. Also tell them how you liked the program!

WHERE CAN I LEARN MORE?

Visit ***www.DXing.com***

GRUNDIG

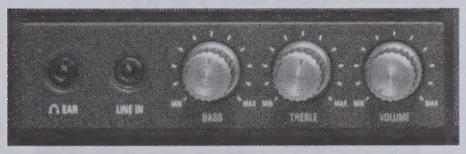
SATELLIT 750

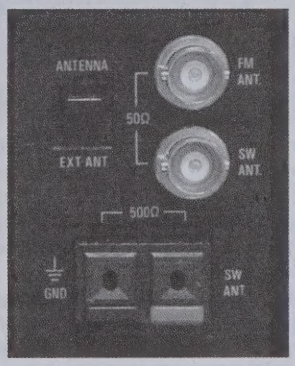
The **Grundig Satellit 750** is an exciting new portable that brings the world to you! You will get complete coverage of long wave (100-519 kHz) , medium wave and shortwave frequencies as well as FM (stereo to the earphone jack). Plus the Satellit 750 also receives the VHF aeronautical band (118-137 MHz). Your shortwave coverage includes the reception of the single sideband (SSB) mode allowing the reception of ham radio operators, maritime and shortwave aeronautical stations. You can select either wide or narrow selectivity to reduce co-channel interference. You can tune your favorite stations by the conventional tuning knob, quick keypad entry or via the 1000 memories. Two speed tuning increments (1 and 5 kHz) are available. And you will enjoy the fidelity you have come to expect from Grundig - enhanced by separate bass and treble controls. The radio features both an Earphone Jack and a Line Output Jack. The built in 24 hour clock has a dual alarm and a sleep feature. This radio can simultaneously display the frequency and the time on the large backlit LCD. It will also indicate external/internal antenna selection, battery status, memory, selected bandwidth and attenuator status. Long distance AM band reception is possible with the built-in 360° rotatable, directional ferrite antenna. External antennas may also be attached. 14.65 x 7.24 x 5.75 inches 5.25 lbs. Includes AC adapter or may operate from four D cells (not supplied). One year limited manufacturer's warranty. Latest production with metal knobs.

List $400.00 *Order #0750* **Call**

You can tune the world on your Satellit 750 via a conventional tuning knob, keypad entry, Up-Down buttons or memory selection.

Separate bass and treble controls allow you to tailor to your listening tastes.





Switchable BNC jacks are provided for FM and shortwave antennas. High impedance (500 ohm) terminals are provided for simple shortwave wire antennas. There is also a mini jack available for the AM and longwave bands.

This optional jack adapter changes the BNC to an SO-239 to accept a PL-259 plug.

UG255 *Order #2122* **$2.95**

GRUNDIG

G2 REPORTER

The **Grundig G2 *Reporter*** has a unique slender design with dual stereo speakers. It receives AM, FM, FM stereo and continuous shortwave from 2.3 to 23 MHz. The huge 248 channel memory system has memory scan and auto tuning storage. There is even a Line Input jack. There is also a built in MP3/WAV recorder with 4 GB flash memory and built-in mic. So you can record off-the-air, via line input or via mic. There is a mini USB 2.0 jack. There is built-in micro-SD card port (supports up to 16 Gb). Other features include: keypad entry, clock time, lock and backlit LCD with tuning strength indicator. The G2 can be set to operate in 17 languages. The built-in rechargeable lithium battery (1250 mAh) charges through the mini USB port. 7.5 x 3.5 x 0.8" 9.6 oz. Regularly $149.95. ***CLOSE-OUT.***

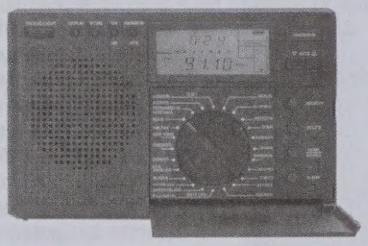
G2 Reporter *Order #5002* **$54.98**

Protect your G2 when you are on the move with this black vinyl case with a velcro type closure.

G2_CASE *Order #0665* **$19.95**

GRUNDIG

G8 TRAVELER II



The **Grundig G8 Traveler II** covers longwave, medium wave, shortwave and FM bands. Shortwave coverage is: 3190-3450, 3850-4050, 4700-5100, 5700-6300, 7080-7600, 9200-10000, 11450-12200, 13500-13900, 15000-15900, 17450-17900, 18850-19100 and 21430-21950 kHz. The G8 has an analog circuit with digital display. It features a 24 hour clock with alarm that can wake you to a buzzer or to your favorite radio station. Other features include: key lock function, backlit display, fast or slow tuning, longwave disable function, DST adjust and 9/10 kHz AM band step. There is also an extensive memory system that may be filled manually or automatically (ATS). The capacity is: 100 FM, 100 AM, 100 longwave and 200 shortwave frequencies. There is a built in ferrite bar antenna for longwave and medium and a telescopic whip for FM and shortwave. This radio even employs DSP-Digital Signal Processing to improve reception. Requires three AA cells (not included). With: carry pouch, stereo ear buds and manual. Only 6.625 x 4.125 x 1.125"12.2 oz. Regularly $59.95. ***CLOSE-OUT.***

G8 Traveler II *Order #0888* **$34.98**

GRUNDIG
S450DLX

The **Grundig S450DLX** *Field Radio* offers superior reception of AM, FM and international shortwave. Utilizing dual-conversion superheterodyne circuit design, it's powered by six D cells (not included) for exceptionally long play-time. It receives all shortwave frequencies, continuous from 1.7 to 30 MHz, covering all 13 international shortwave broadcast bands. Get news and events from around the world and superior reception of your favorite domestic AM and FM stations. The built-in sleep timer automatically turns the radio off after 90, 60, 45, 30, 15, 10, 5 or 1 minutes. A wide/narrow bandwidth switch can reduce adjacent channel interference. The main tuning knob may be set to fast tuning, slow tuning or lock. A new *Quick Tune* button allows you to quickly tune across the selected band. Independent Bass and Treble tone controls are featured. Other features include RF Gain, 50 memories (10 per band), IF Output Jack, 12/24 hour clock, dual alarms, 9/10 kHz AM step, padded carry handle, DX/Local sensitivity and External/Internal antenna switches, battery level icon, and selection of mono or stereo FM (stereo FM to earphone jack only). The rear panel has an F type antenna jack for external SW/FM antenna and there is a spring loaded terminal for MW antenna and Ground. There is a built in telescopic antenna for FM and shortwave plus a built in ferrite bar antenna for medium wave [AM]. There are jacks for line level output and line level input, plus a conventional earphone jack. The key light illuminates the dial *and* the push button keys on the front panel. Includes 9 VDC AC adapter. Also operates from six D cells (not supplied). 12.2 x 8.5 x 3.8 inches.

S450DLX *Order #5450* **$88.98**

etón MINI

The **Eton Mini** is a very compact radio that will put the world in your pocket. It receives the regular AM and FM stereo (to ear jack), plus the international shortwave bands. Use USB cable (included), 2 AAA batteries or plug a 6V AC adaptor into the DC jack (sold separately). 2.7 x 4.3 x 0.5".

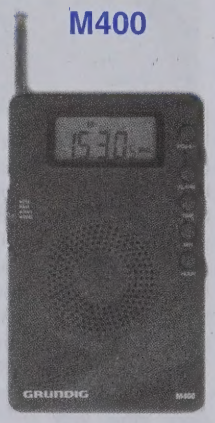
MINI *Order #0154* **$44.95**

etón SATELLIT

The **Eton Satellit** is the culmination of 50 years of Satellit models. This latest version delivers the great radio reception and audio quality you have come to expect from Grundig and Eton radios. The radio provides full reception of longwave, medium wave [AM band], shortwave and FM broadcast (with RDS). Additionally, it covers the civil VHF aeronautical band. 700 memories store your favorite stations. The dual conversion design provides great sensitivity and image rejection. The Sync Detector feature improves the radio's sound quality by reducing distortion and fading. The Local-DX switch allows you to adjust the sensitivity of the radio. A rich orange display indicates your exact frequency and signal strength. There is a built-in clock timer feature. There is an earphone jack for private listening as well as a Line Input jack to connect an external audio source. Supplied with carry pouch and AC adapter. Requires four AA batteries (not included). Size 6.6 x 4.1 x 1.2 inches.

Satellit *Order #0050* **Call**

GRUNDIG
M400



The **Grundig M400** is an ultra compact portable radio that covers the AM (520-1710 kHz), FM (87-108 MHz) and shortwave in two bands: 5.9-10 and 11.65-18 MHz. The M400 features an analog circuit with digital display and has easy-to-use controls. The frequency display is to the nearest 1 kHz on AM and to 5 kHz on shortwave. There is a built-in clock-alarm. The right side of the radio has the tuning knob and a lock button to prevent accidental frequency changes. The earphone jack is on the top. An amazingly thin radio ... under ½ inch! The built in 4 ohm speaker is 40mm wide. The collapsible telescopic whip is for the FM and shortwave bands, and does not need to be extended for AM band reception. This radio operates from two AAA cells (not included). Supplied with earbuds and an elegant soft case that permits the radio to be played even while inserted. 2.75 x 4.33 x 0.472 inches 3.2 ounces.

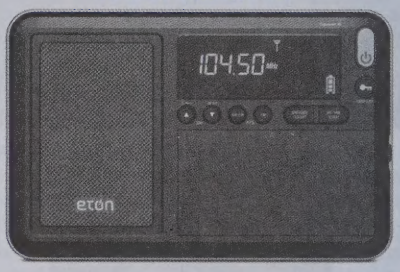
M400 *Order #3400* **$29.95**

etón FIELD

The **Eton Field** is keeps you in touch with the world wherever you are. It receives AM, FM and complete international shortwave coverage from 1.7 to 30 MHz. There is a built in digital clock timer. This radio features RDS - Radio Data System that enables FM broadcasters to deliver more than just an analog audio signal, but also to transmit digital data, like the station's call letters, style of music, song title, artist and more. It can even display the temperature. Plus, its wide/narrow bandwidth selection improves audio fidelity and minimizes noise. The AM band can display in 9 or 10 kHz increments. There is a Local/DX switch and battery status icon. Display brightness may be set to Low, Medium or High. Antenna jacks are provided for both MW or SW/FM antennas. Operates on four D cells (not included) or supplied AC adapter. 12.4 x 6.9 x 3 inches.

FIELD *Order #0018* **$149.95**

etón TRAVELER III

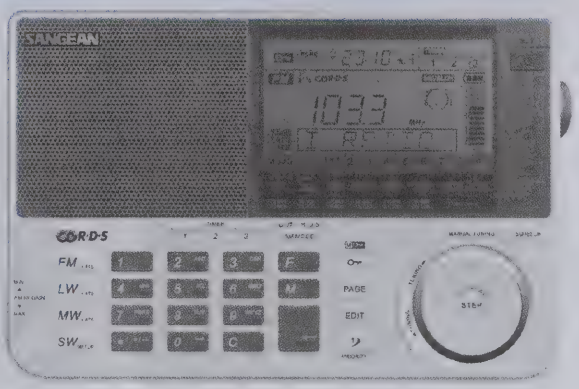


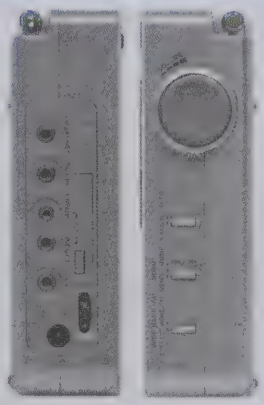
The **Eton Traveler III** receives long wave, AM, FM and shortwave from 2.3 to 26.1 MHz. The medium wave (AM) step may be set for 9 or 10 kHz. With local and world time settings, radio and buzzer alarm clock settings, sleep timer and snooze light, the Etón Traveler III keeps you on time ... in any time zone. It even displays the temperature to help you prepare for the day. The time zone selection knob is located under a protective cover. The display brightness may be set to *off*, *low* or *high*. And if you want to prevent the radio or alarm from turning on all together, just hit Lock. Other features include 500 memories, FM RDS and 6 VDC [+] power input jack. Tuning is easy via a manual tuning knob (on the left panel), up-down arrows. There is a 3.5mm mini earphone jack and a built-in snap-out flip stand. Requires 4 AA batteries (not included). 5.3 x 3.5 x 1.2". 7.4 oz. Includes cloth carry pouch and owner's manual.

Traveler III *Order #6003* **$59.95**

SANGEAN

ATS-909X
ATS-909X BK





The **ATS-909X** is the proud flagship of the Sangean line. It packs features and performance into a very compact and stylish package. Coverage includes all long wave (153-519 kHz), medium wave (520-1710 kHz) and all shortwave frequencies (1711-29999 kHz). FM and FM stereo to the headphone jack is also available (87.5-108 MHz). The new enlarged LCD features a bright white LED for excellent clarity. Shortwave performance is enhanced with a DSP decoder IC and wide-narrow bandwidth switch. The ATS-909X provides unusually good single side band performance for a portable. SSB tuning in 40 Hz steps permits easy signal clarification. Enjoy a full watt of audio amplification. Five tuning methods are featured: direct keypad entry, manual tuning, auto scan, manual up-down tuning, memory recall or manual knob tuning. The ATS-909X will display FM RDS / RBDS with PS, PTY, RT and CT features for station name and clock in areas where this service is available. 406 memories are available (FM 27, LW 9, MW 18, SW 352 and 1 priority preset). There is a built in world time clock supporting DST and with two editable city names. Other features include: Stereo/Mono switch, RF gain, squelch, auto scan and flip-stand. This radio requires four AA cells (not included). With AC adapter, case, wind-up antenna and manual. 8.2 x 5.2 x 1.5 inches 1.8 lbs. **White** colored case (shown).

ATS-909X *Order #2909* **$249.95**

Black colored case (not shown).

ATS-909X BK *Order #4909* **$249.95**

The new ATS-909"**X**" version offers many improvements over the original ATS-909:

- ✔ Added a battery charger
- ✔ Larger LCD
- ✔ Higher illumination of white LED backlit LCD
- ✔ Rugged and firm cabinet
- ✔ Tripled audio output power to improve fidelity
- ✔ Additional Aux-in (LINE-IN)
- ✔ Improved controls and ergonomics
- ✔ Squelch added for adjusting seek sensitivity
- ✔ 99 presets more than ATS-909
- ✔ Higher selectivity than ATS-909 by DSP tuner
- ✔ Improved sensitivity on shortwave
- ✔ Longer stainless SW/FM telescopic antenna
- ✔ Improved battery cover and tilt stand
- ✔ Independent headphone amplifier

The Sangean ATS-909X left panel features:

- ✔ Fine Tune Knob
- ✔ AM External Antenna
- ✔ Auxiliary Input
- ✔ Line Output (Record)
- ✔ Record Control (compatible with DAR-101)
- ✔ Stereo Headphone Jack
- ✔ AC Input (9 VAC)

The Sangean ATS-909X right panel features:

- ✔ Volume
- ✔ Three Position Tone Switch
- ✔ Time Set
- ✔ Wide - Narrow AM Selectivity
- ✔ Mono - Stereo FM Switch

ATS-404

The **Sangean ATS-404** coverage includes AM, FM and 14 SW bands, or in continuous mode from 2.3-26.1 MHz. Tune via the up-down buttons, automatic tuning, keypad or from the 45 memories. The LCD shows frequency or the 12/24 hour time. Other features include: FM stereo to headphone jack, low-battery indicator, dial lock, 9/10 kHz MW step, dial lamp, stereo-mono switch, alarm by radio or buzzer, auto-scan, sleep-timer, tune LED, tilt-stand and 6VDC jack. With protective case and earphones. Silver-gray finish. 6½ x 4 x 1½" 10 oz. Requires four AA cells (not included) or optional *#1665* ADP-808 AC adapter $12.95.

ATS-404 *Order #2181* **$79.95**

ATS-505P

The **Sangean ATS-505P** covers long wave 153 - 279 kHz, AM 520-1710, shortwave solid from 1711-29999 kHz plus FM 87.5-108 MHz. The backlit display can show either the frequency or the time (12/24 format). Tune via the tuning knob, Up-Down buttons, automatic tuning, keypad entry or from the 45 memories. The ATS-505P even tunes Morse code and single sideband (SSB) using a separate Clarify knob on the side of the radio. You may press in the tuning knob to select between normal and fine tuning (1 or 10 kHz on AM/LW and 1 or 5 kHz on SW). Other features include: FM stereo to headphone jack, 9/10 kHz AM step, beep on/off, dial lock, stereo-mono switch, alarm by radio or buzzer, auto-scan, auto memory, sleep-timer, tune LED, tilt-stand, external antenna input and 6VDC jack. Includes: AC adapter, case, earphones and ANT-60 wind-up antenna. Titanium matte finish. 8.5 x 5.3 x 1.6 inches (214x128x39mm) 1 lb. 8 oz (840 g). Requires four AA cells (not included).

ATS-505P *Order #3505* **$119.95**

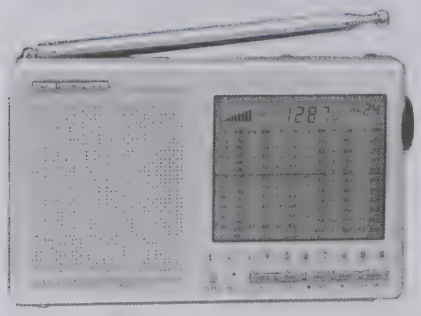
GP-5/SSB

The **CountyComm GP-5/SSB** provides serious HF communications monitoring in a unique form factor and at a great price. The radio covers medium wave 520-1710kHz, shortwave 2300-30000 kHz and the FM band. Unlike most radios in this price category, the GP-5/SSB provides LSB and USB single sideband reception. It has a very unique Easy Tuning Mode (ETM) that scans all frequencies without taking up the memory spaces. So you get quick access to all local stations. Great for the traveller. There are also 450 regular memories (100 AM, 100 FM and 250 shortwave) available for tuning into your favorite stations. Another unique feature of the radio is its removable high sensitivity external AM ferrite antenna. This directional antenna clearly enhances AM band reception. The GP-5/SSB even employs DSP (Digital Signal Processing) technology, improving clarity and tone quality. There is an adjustable sleep timer. The radio can be powered by three AA batteries (not included). It also has 5V mini-USB DC input jack. When using the USB jack, the radio can be used to charge the batteries (rechargeable AA batteries only). Your GP-5/SSB includes: MW bar antenna, stereo ear buds, soft case, wire antenna and manual.

GP-5/SSB *Order #0905* **$79.95**

KAITO ELECTRONICS INC

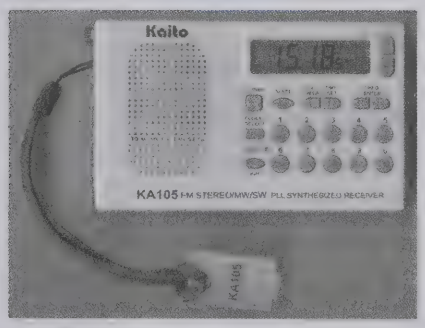
KA1103



The **Kaito KA1103** is a dual conversion portable radio covering AM 520-1710 kHz and SW in ten bands: 3.2-4, 4.6-5.4, 5.6-6.4, 6.6-7.4, 9.1-9.9, 11.5-12.4, 13.5-14.4, 15-15.9, 17.1-18, 21-21.9 MHz. Single side band (SSB) mode is available with fine tuning. 190 user memories are available plus auto scan and auto memory. A built in clock has 3 alarms and wakes you to beeper or radio. The backlit LCD features a signal strength indicator. There are switches for: DX-Local, FM Mono-Stereo, Tone and Wide-Narrow selectivity. Other refinements include: battery power indicator, lock and sleep. There are jacks for external antenna, stereo earphones and line output. With four AA NiMH cells, AC adapter-charger, wrist strap, wire antenna, carry bag, stereo earbuds and manual. 6.5 x 4.1 x 1.2 inches.

KA1103 Silver *Order #0028* **$79.98**
KA1103 Black *Order #0029* **$79.99**

KA105



The **Kaito KA105** has a striking aluminum alloy front panel. This stylish portable tunes AM from 520-1710 kHz (10 kHz steps), shortwave from 5.95 to 15.60 MHz (5 kHz steps) and FM from 87.5 to 108 MHz. Tuning is easy with manual tuning, seek tuning, memory tuning and direct keypad entry. It features 30 memory presets. A dual 24 hour clock has alarm and sleep functions. Other controls include: stereo-mono switch, lock switch and LCD lamp switch. There is a jack for external power (3-5 VDC) or the radio operates from two AA cells (not supplied). There is a built-in ferrite antenna for AM and a telescopic whip for SW and FM. There is also an external antenna jack for SW. The KA105 comes with: AC adapter, cloth carry pouch, external wire antenna, wrist strap (with backrest clip) and stereo earbuds. 4.25 x 2.9 x 0.9". One year limited manufacturer's warranty.

KA105 *Order #0105* **$49.95**

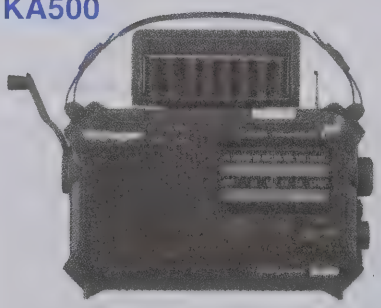
KAITO ELECTRONICS INC

KA450

The **Kaito KA450** can be powered by dynamo cranking, solar panel power, three AA cells (not supplied), built-in rechargeable battery pack, AC adapter or from a computer via the USB port. The radio is designed to charge some other electronic items. It has a bidirectional USB jack to connect with many standard USB enabled items like iPods, cell phones, etc. This radio tunes AM, FM and shortwave from 3.2-8 and 9-18 MHz. The weather band has an alert feature. The bottom side of the solar panel has a 5 LED reading lamp and the radio has an LED flashlight on the side. With AC adapter. Green case. 8 x 4.5 x 2.5" 1 lb.

KA450 GRN *Order #5360* **$49.95**

KA500



The **Kaito KA500** ***Voyager*** has all the features that you need in an emergency situation. There are six ways to power the KA500: Dynamo Cranking, Solar Panel Power, 3 AA cells, built-in Ni-MH battery pack, optional AC adaptor charge or from a computer via the USB port. It has a bright five LED reading lamp on the back panel. The radio is designed to charge out for many electronic items, it is built with a USB jack that can connect with many standard USB enabled items like iPods, cellphones, etc. Reception includes AM, FM and two shortwave bands covering 3.2-8 and 9-22 MHz. The weather band has an alert feature. Black rubberized weather resistant body.

KA500 BLK *Order #0131* **$59.95**

KAITO ELECTRONICS INC

The **Kaito AD800** AC adapter has USB 5 VDC 500 mAh output to power many of today's compact portable receivers such as the: G2, KA350, KA800, KA801, DE1123, DE1125, DE1126, PL360, PL380, PL390, PL606.
Input is 100-240 VAC 50/60 Hz.

AD800 *Order #5871* **$14.95**

KAITO ELECTRONICS INC

KA1107

The **Kaito KA1107** is a dual conversion, analog display receiver that covers AM, FM and 10 shortwave bands: 3.75-4.25, 4.50-5.10, 5.90-6.40, 7.10-7.50, 9.35-9.95, 11.60-12.10, 13.50-13.90, 15.10-15.70, 17.50-17.90 and 21.40-21.90 MHz. This model has high sensitivity making it a strong choice for difficult reception areas such as apartments or offices. There is a digital 12 hour clock with sleep timer (up to 119 minutes). Other features include: sensitivity switch, tone switch, stereo/mono switch, external antenna jack and dial scale. Requires four AA cells (not supplied). The KA1107 system includes: AC adapter, cloth carry pouch, external wire antenna, wrist strap and stereo earbuds. 7 x 4 x 1.25 inches 10 ounces. Gray colored.

KA1107 *Order #1107* **$49.95**

WRX911

The **Kaito WRX911** provides worldwide listening on a budget. This analog portable covers AM, FM and nine shortwave bands: 4.60-5.20, 5.75-6.40, 6.95-7.65, 9.30-9.90, 11.55-12.10, 13.55-13.85, 14.85-15.80, 17.40-18.05 and 21.30-21.95 MHz. The WRX911 is easy to use and fits in your shirt pocket. Requires two AA cells (not supplied) or 3 VDC. Because this radio does not have a digital display it is a good choice for situations where battery efficiency is an important fact. Great for camping. With a cloth carry pouch, earbuds and wrist strap. 4.5 x 3 x 1 inches. Available in black or blue.

WRX911 Black *Order #0911* **$24.95**
WRX911 Blue *Order #1011* **$24.95**

AD800

KAITO ELECTRONICS INC

KA600

The **Kaito KA600** ***Voyager Pro*** has features you need in an emergency situation. Reception includes AM, FM, NOAA weather and shortwave band from 2.3 to 23 MHz. The weather band has an alert feature. There are 6 ways to power this radio:
1. Dynamo cranking: 120 turns per minute of cranking will power the built in NiMH battery pack.
2. Solar panel under the direct sunlight.
3. Three AA batteries (not included)
4. A built-in rechargeable battery pack.
5. Optional AC adaptor charge from the mini jack.
6. Charge from a computer via USB port.

The dynamo power source features a high quality AC type brushless generator. The solar panel powers the radio by itself and charges the built-in batteries as well. To maximize the sunlight's rays, the solar panel is designed to tilt with the sun's position to receive the energy during the day. On the bottom side of the solar panel is a five LED reading lamp that you can use in poorly lit conditions. The radio even has an integrated keypad and multifunction LED flashlight. It has a USB jack that can connect to many standard USB enabled devices such as your iPod or cell phone. This lets you charge many cell phone models by cranking or solar power. Available in silver, black or green.

KA600 SIL	*Order #5656*	**$79.95**
KA600 BLK	*Order #5830*	**$79.95**
KA600 GRN	*Order #5804*	**$79.95**

KAITO ELECTRONICS INC

KA1102

The **Kaito KA1102** is a dual conversion portable radio covering AM, shortwave and FM. AM coverage is from 522-1710 kHz (1/9/10 kHz steps) and shortwave coverage is 3000-29990 kHz in 1/5 kHz steps. Single side band (SSB) mode is available on shortwave with fine tuning. 190 memories are available in 10 banks of 19 presets each. A keypad allows direct frequency entry. Auto scan and auto memory is supported. A built in clock has 3 alarms and wakes you to beeper or radio. The large, attractive LCD is backlit and it features a signal strength indicator. There is a DX-Local sensitivity switch. Additionally there is a two position tone switch. There is also a button that selects Wide-Narrow selectivity (or Mono-Stereo while on the FM band). Other refinements include: battery power indicator, lock and sleep. There is an external antenna jack and a stereo earphone jack. This radio comes with three AA Ni-MH rechargeable batteries and an AC adapter. The AC adapter not only works as a DC power source, but it also charges the batteries automatically. With wrist strap, protective carry pouch and stereo earbuds. A manual and guide sheet are also included. One year manufacturer's limited warranty. 5.7 x 3.7 x 1.2" Available in silver or black.

KA1102 Silver	*Order #0000*	Discontinued
KA1102 Black	*Order #0000*	Discontinued

SONY

ICF-SW7600GR

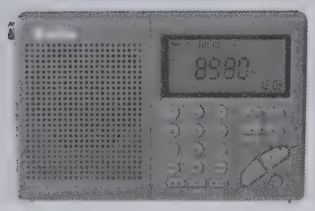
The **Sony ICF-SW7600GR** is a compact, dual conversion, microprocessor-controlled, frequency synthesized general coverage portable receiver. Direct access tuning is provided along with a multifunction LCD digital readout for unsurpassed convenience and accuracy (1 kHz step tuning on longwave, medium wave and shortwave). Just press the numbered keys to match the frequency you want to hear. Manual tuning and automatic scan tuning plus memory scanning are provided. 100 memories are featured for your favorite stations. These memories are nonvolatile and therefore will not be lost during the changing of batteries. The ICF-SW7600GR tunes from 150 to 29999 kHz for solid coverage of longwave, medium wave and shortwave. Smooth Single Sideband (SSB) and Morse code reception is available through a switch with separate LSB and USB positions plus fine tuning thumb-wheel. A special Synchronous Detector circuit reduces fading and annoying "beat" frequency interference from adjacent stations as well as distortion due to fading shortwave reception. FM stereo (87.6-108 MHz in 50 kHz steps) is provided to the mini stereo headphone jack. A record output jack is included for taping off the air. Advanced features include: dial light, continuously variable attenuator, 9/10 kHz MW step, "Tune" indicator, keypad lock, 1/5 kHz step tuning, flip-stand, tone switch and external antenna jack. There is also a Sleep function which can be set for 15, 30, 45 or 60 minutes. The side-lit dial light will illuminate the LCD green for 15 seconds when the dial light switch is pressed. This radio has a 24 hour digital quartz clock with dual timer. You can set the radio audio to come on with Timer A and Timer B. The current time is displayed when the radio is off. To view the time while the radio is on simply press the [EXE] key. The time will then display automatically for 9 seconds.
Supplied accessories include: wind-up antenna, wrist strap, carry case and *Sony Wave Handbook.* Only 7.5 x 4.75 x 1.25 inches 22 oz. (191x120x32 mm 624 g). Made in Japan. This radio requires 6 VDC or four AA cells (not supplied). See optional MW-41-680.

ICF-SW7600GR	*Order #0360*	**$159.95**

Universal offers a filtered AC adapter for use with the ICF-SW7600GR. Not Sony brand.

MW-41-680	*Order #2023*	**$21.95**

KA11



The **Kaito KA11** covers AM, FM and shortwave from 5.8 to 18.1 MHz. It has a backlit LCD digital display with clock timer, keypad frequency entry and 1000 nonvolatile memories. The left panel has a Local/DX switch and mini external SW/FM antenna jack. The right panel has DC input and earphone jacks. There is a built in 12/24 hour clock-timer with adjustable sleep timer (1 to 99 minutes). The AM band tuning step may be set for 9 or 10 kHz. There is a switch for FM stereo or mono. There is a mini external antenna jack for FM/SW. Comes with: AC adapter, stereo ear buds, wrist strap and soft wire antenna. Requires two AA cells (not included). 4.5 x 3 x 1.1 inches.

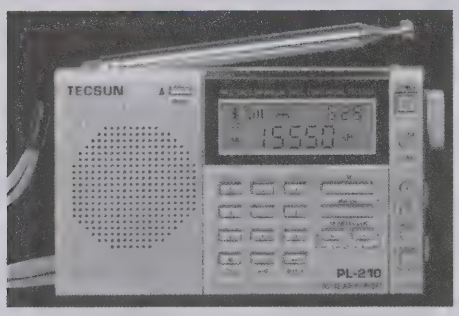
KA11	*Order #0011*	**$44.95**

KA008

The **Kaito KA008** is a self sufficient digital radio covering AM, FM and four SW bands: 4.0- 9.0, 9.0-14, 14-19 and 19-26.1 MHz. The KA008 has a built in hand generator and solar cell array for internally recharging 3 NiMH AA cells (not supplied). The KA008 may be operated from the supplied AC adapter. This radio has a built-in emergency LED lamp and clock-timer. Comes with: AC adapter, earbuds, wrist strap and soft wire antenna. Size: 6.5 x 5.5 x 2.25 inches. Ninety day limited manufacturer's warranty.

KA008	*Order #4573*	**$34.95**

TECSUN PL-210



The **Tecsun PL-210** is an affordable, double conversion, digital portable receiver that covers longwave, medium wave and shortwave from 1700 to 30000 kHz. It features 1700 memories, meter band indication, digital clock with alarm and sleep, lock key, sensitivity switch, and stereo FM to the earphone jack. The backlit display shows frequency, meter band, signal strength, battery condition, FM stereo icon, error codes and time in 12 or 24 hour format. Tune your favorite stations by turning the knob, selecting a memory, scanning or keypad entry. This radio includes: zippered carry case, stereo ear buds, wire antenna, wrist strap and manual. Requires two AA cells (not included). 4.75 x 3 x 1 inches. 125x75x26mm.

PL-210 BLACK *Order #5210* **$59.95**

PL-210 SILVER *Order #0000* Discontinued

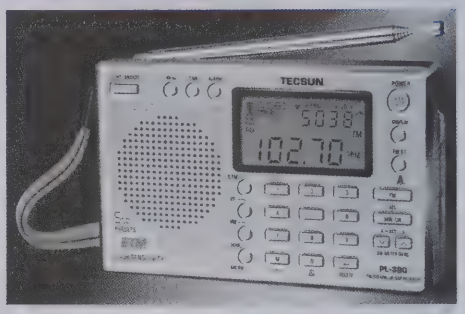
TECSUN PL-660

The **Tecsun PL-660** is a sensitive portable radio covering AM, long wave, shortwave, VHF air and FM bands. The radio comes with an awesome 2000 memories: 100 AM/FM/LW/Air, 200 SW, 200 SSB and 1200 for various bands (12x100). Features include dual timer, sensitivity, backlit display, time & temperature display, SW/FM external antenna jack, SSB reception, stereo FM (to earphone jack), synchronous detection, keypad entry, dual conversion, manual tuning, scanning, DX/Normal/Local gain and ATS auto-tune storage. This radio includes: carry pouch, four AA cells, AC wall adapter, stereo ear buds, wire antenna and owner's manual. 7.4 x 1.3 x 4.5 in. 1.1 lbs.

PL-660 BLACK *Order #5903* **$109.95**

PL-660 SILVER *Order #2540* **$109.95**

TECSUN PL-380



The **Tecsun PL-380** *ultralight* covers long wave, medium wave, shortwave from 2.3-21.95 MHz and FM, including FM stereo to the earphone jack. This smart radio features DSP technology using a Silicon Labs si4734 chip to improve performance. It has 550 memories (100 for LW, 100 for MW, 100 for FM and 250 for SW). Both memory and band scanning is supported as well as ETM easy tune memory. Other features include: keypad, lock, clock with alarm and sleep and dial lamp. Band widths of 1, 2, 3, 4 and 6 kHz may be selected. The backlit display shows frequency, time, alarm set, signal strength and temperature (F/C). There is an internal ferrite bar antenna for medium wave (AM band) and a telescopic whip antenna for FM and shortwave. Includes: zippered carry case, stereo ear buds, wire-clip antenna, wrist strap and manual. Requires three AA cells (not included). There is a built-in charging system to charge three NiMH AA cells (if used, not included) via a 5VDC USB port. There is a tilt-stand built into the back panel of the radio. 5.35 x 3.4 x 1.1 inches 7 oz.

PL-380 GRAY *Order #6024* **$59.95**

TECSUN PL-606

The **Tecsun PL-606** is a compact portable radio covering AM (520-1710 kHz), long wave, shortwave (2.3-21.950 MHz) and FM bands. This feature packed radio has FM stereo to the earphone jack, scanning, *Easy Tuning Mode* (ETM), backlit LCD, selectivity control, clock timer with alarm and snooze, 9/10 kHz MW step, battery icon and a USB charging jack. It even uses DSP technology for improved sensitivity and selectivity. You also get a total of 550 memories: 250 for shortwave, 100 for FM, 100 for long wave and 100 for medium wave. The controls are easy to operate. This radio may be tuned manually, via auto tune or memories. This radio operates from two AA cells (not included). Comes with carry pouch, antenna extender, stereo ear buds, wire antenna and manual. 4.9 x 3.3 x 0.9" 6.2 ounces.

PL-606 *Order #5814* **$59.95**

TECSUN PL-360

The **Tecsun PL-360** has to be one of the coolest looking shortwave portables ever. Yes, it looks like a TV remote control, but it is a very decent receiver. It covers medium wave 520-1710 kHz shortwave 2300-21950 kHz and the FM band. Longwave coverage may also be activated. It has a very unique *Easy Tuning Mode* (ETM). ETM does more than the usual ATS. It scans all frequencies without taking up the memory spaces. So you get quick access to all local stations. Great for the traveller. There are also 450 memories (100 AM, 100 FM, 250 SW) available for tuning into your favorite stations. Memory and band scanning are supported. The PL-360 has a removable high sensitivity external AM ferrite antenna. The PL-360 even employs DSP-*Digital Signal Processing* technology, improving clarity and tone quality. The PL-360 can be powered by three AA batteries (not included). It also has 5V mini-USB DC input jack. When using the USB jack, the radio can be used to charge the batteries (rechargeable AA cells only). The PL-360 comes with: medium wave bar antenna, stereo ear buds, wire antenna, pouch and manual. 2.1 x 6.3 x 1.1" 5 ounces.

PL-360 *Order #3681* **$59.95**

TECSUN PL-600

The **Tecsun PL-600** is a capable radio, available at a very attractive price. It covers longwave, AM, FM and shortwave. This dual conversion receiver offers selectable wide or narrow selectivity to reduce interference. It is capable of Single Sideband (SSB) reception. Other refinements include: 12/24 hour clock timer, 600 memories, scanning, FM stereo (to ear jack), keypad entry and backlit LCD display. Many user preferences may be adjusted by programming the radio's system codes including memory partitioning and medium wave step. Includes AC adapter-charger, stereo ear buds, four Ni-MH AA cells, carry pouch and external antenna. 7.5 x 1.2 x 4.8 inches 16 oz.

PL-600 *Order #2600* **$89.95**

TECSUN PL-398BT

The **Tecsun PL-398BT** tunes longwave from 153 to 513 kHz, medium wave 520 to 1710 kHz (9 or 10 kHz steps), shortwave from 2300 to 21950 kHz (1 kHz resolution). Tune by: jog dial manual dial tuning, auto scan tuning, preset manual scan, memory auto scan, and direct digital entry. This radio has a backlit digital display with signal meter, 12/24 hour clock, temperature and battery consumption. Other features include dual speakers, alarm with snooze and sleep, stereo FM and key lock. This radio has Bluetooth technology that allows you to wirelessly play your Bluetooth music player or other device through the radio! The telescopic antenna for FM/SW and a ferrite bar for LW and MW. Requires three AA cells (not included) or external 5VDC USB adapter (not included). Includes stereo ear buds, audio jumper cable, wrist strap and cloth case. 7.3 x 1.3 x 3.5" 12 oz.

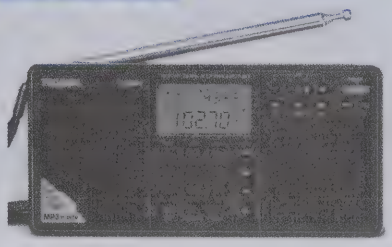
PL-398BT *Order #4398* **$79.95**

TECSUN PL-390

The **Tecsun PL-390** has a different look and a different sound. It covers medium wave 520-1710 kHz shortwave 2300-21950 kHz and the FM band. It has a very unique Easy Tuning Mode (ETM). ETM does more the usual ATS. It scans all frequencies without taking up the memory spaces. So you get quick access to all local stations, plus direct keypad entry. Great for the traveller. There are also 450 regular memories for tuning into your favorite stations. The PL-390 has dual speakers and even employs DSP (Digital Signal Processing) technology, improving clarity and tone quality. The PL-390 can be powered by three AA batteries (not included). It also has 5V mini-USB DC input jack (for use when *rechargeable* AA batteries are installed). With soft carry case, stereo ear buds, wire antenna and manual.

PL-390 BLK *Order #5594* **$64.95**
PL-390 SIL *Order #5834* **$64.95**

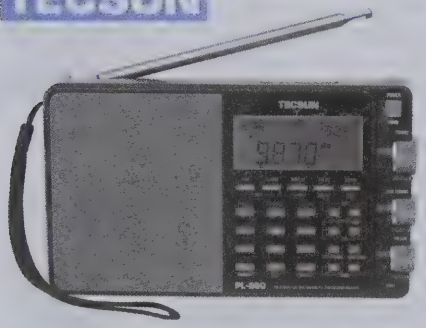
TECSUN PL-398MP



The **Tecsun PL-398MP** is a capable longwave, AM, FM and shortwave receiver and doubles as a music player! To use the PL-398MP as a music player simply plug in an SD card (not supplied) with your favorite MP3 tunes. You can tune this radio via manual tuning, auto scan tuning, presetting manual scan tuning, memory preset auto scan tuning, memory preset address direct entry tuning and direct frequency entry via the keypad. Both the display and the input keys are backlit. You get a total of 550 memories: 100 each for LW, MW and FM and 250 for shortwave. The display shows frequency, signal strength, battery consumption and temperature. The 12/24 hour clock has a sleep timer. Other features include: key lock, dual speakers, meter band display, alarm by radio or buzzer. Operates from three AA batteries (not included). It has 5V mini-USB DC input jack (for use when *rechargeable* AA batteries are installed). With stereo ear buds, audio jumper cable, wrist strap and cloth case. 7.3 x 1.2 x 3.5" 12 oz.

PL-398MP *Order #1398* **$69.95**

TECSUN PL-880



The **Tecsun PL-880** offers features not previously available in a radio of this size and price. As expected, you get full coverage of long wave 100-519 kHz, AM from 522-1700 kHz, shortwave from 1.7-30 MHz and FM from 64-108 MHz. Designed for the serious listener and DXer, you can select four bandwidths in AM mode: 9, 5, 3.5 or 2.3 kHz and five bandwidths in SSB mode: 4, 3, 2.3, 1.2 and 0.5 kHz. This radio even has interesting undocumented features such as sync. lock, variable muting, adding seconds display, etc. The PL-880 includes: carry pouch, ear buds, wire antenna, USB cable and #18650 Li-ion battery. Now available in black or silver colored case.

PL-880 BLK *Order #0088* **$159.95**
PL-880 SILV *Order #0388* **$159.95**

Please visit our used equipment department at:
www.universal-radio.com

DEGEN® 德劲 DE15

The **Degen DE15** is a portable radio covering AM, FM, and shortwave from 2300 to 23000 kHz. The radio features 225 memories (100 for shortwave, 100 for FM and 25 for the AM band). Tuning is via up-down buttons and scanning. There is also a useful ATS (Auto Tuning Station) function that tunes available signals and stores them in memory. The DE15 has a built-in 12/24 hour clock with sleep function (5-90 minutes). Other features include: backlit LCD, headphone jack, 9/10 kHz MW step, battery level indicator, and built-in battery charger. With: AC adapter, three Ni-MH rechargeable AAA cells, protective carry pouch and stereo ear buds. Only 2.7 x 4 x 0.6 inches 3 ounces.

This radio may come to you under the Kaito label or the Degen label.

DE15 *Order #5335* **$49.95**

DEGEN® 德劲 DE1127

The **Degen DE1127** is an innovative portable radio covering AM (520-1710 kHz), shortwave (2.3-23 MHz) and FM. The radio features 248 (FM 99, MW 50, SW 99) memories. Tuning is via up-down buttons. There is also a useful ATS (Auto Tuning Station) function that tunes available signals and stores them in memory. The DE1127 has a built-in clock with sleep function. Other features include: headphone jack, backlit LCD, 9/10 kHz MW step, 31 level volume control, Signal strength indicator and battery level indicator. The coolest feature of this radio is its built-in 4GB MP3 player/recorder. You can record directly from the radio or "live" via the integrated mic. MP3 and WMA decode is supported plus there are three play modes. The DE1127 has a mini USB 2.0 jack.

This radio includes: rechargeable lithium battery, cloth carry pouch, stereo ear buds, USB cable plus printed English manual. 1.75 x 4.4 x 0.75".

DE1127 *Order #1127* **$69.95**

C.CRANE CSW

The **CC Radio CSW** tunes AM, FM and shortwave bands [1711-30000 kHz]. Thanks to the built-in Twin Coil Ferrite™ AM Antenna, this masterful radio has AM reception in the same class as the legendary CCRadio+. The CCRadio-SW comes with a large, easy-to-read LCD display and all the adjustments necessary for excellent performance under various conditions. C. Crane provides a clear, straightforward manual to get you started. Here are some of its outstanding features: RF Gain Control, Bandwidth Control, Bass and Treble Controls, Fast and Slow Tuning, 50 Memories, Lighted Buttons, Clock Radio with Snooze Alarm, Stereo Line Output and Headphone Jack, IF Output for Input to Computer. Runs on four "D" size batteries (not included) *or* four backup AA batteries (not included). Built-in charging circuit will recharge optional NiMH batteries inside the radio, saving you both time and money. AC Adapter and two KOK PAL antenna connectors are included. 11.25 x 7.25 x 3.5". One year limited warranty.

CSW *Order #2678* **$129.95**

Optional nylon carry case for CSW protects your radio when you are on the go.

CSWC *Order #5325* **$24.95**

C.CRANE SWP

The **C Crane SWP** tunes AM, FM and has two shortwave bands. Shortwave Band 1 tunes from 2300-7500 and shortwave Band 2 tunes from 9200-22000. Medium wave coverage is 520 to 1710 kHz tuning in either 9 or 10 kHz steps and FM is 70-108 MHz. FM stereo is available to the earphone jack. This radio also features a clock with timer function and boasts 200 memories. This radio requires 3 VDC or two AA cells (not included). 5 x 3 x 1.2 inches. This radio comes with ear buds, wrist strap and protective vinyl carry case. An optional AC adapter is available. A favorite with the *ultralight* crowd.

SWP *Order #2952* **$44.95**

Optional AC adapter for SWP.

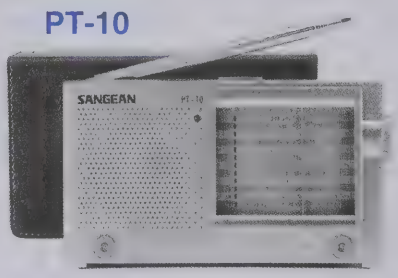
SWPP *Order #3508* **$10.95**

SANGEAN PT-50

The **Sangean PT-50** ProTravel is a compact digital radio featuring AM, FM plus seven shortwave bands: 5900-6200, 7100-7350, 9400-9900, 11600-12100, 13570-13870, 15100-15730 and 17500-17900 kHz. The LCD is backlit and there is a built-in clock that will wake you to radio or buzzer. 12 or 24 hour mode. The rotary knob selects world time zones. There is a Stereo-Mono switch on the side of the radio. Requires two AA cells (not included). With snap-off protective case.

PT-50 *Order #1050* **$59.95**

PT-10



The very stylish **Sangean PT-10** ProTravel is a compact analog radio featuring longwave, AM, FM and nine shortwave bands. Shortwave bands are: 3900-4000, 5900-6200, 7100-7350, 9400-9900, 11600-12100, 13600-13800, 15100-15700, 17500-17900 and 21400 - 21850 kHz. It includes a LED stereo indicator for precise tuning. There is a Stereo-Mono switch on the side of the radio. The PT-10 has a jack for external 3 VDC power adapter (not supplied). Requires two AA cells (not included). Includes a butter-soft handcrafted protective leather case that can be snapped on or off.

PT-10 *Order #5182* **$49.95**

SG-622

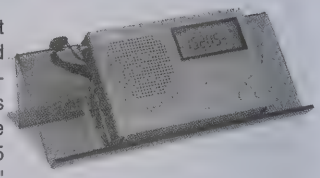
The **Sangean SG-622** is an attractive and affordable analog AM, FM and shortwave radio. The ten shortwave bands cover: 4.5-5.05, 5.8-6.3, 7.1-8, 9.3-9.9, 11.45-12.15, 13.40-14.05, 15.1-15.85, 17.4-18.1, 18.75-19.2 and 21.3-22.1 MHz. This model includes a tuning LED, 2.5 inch speaker, mono mini earphone jack and 4.5 VDC input jack. This radio requires three AA cells (not included). Only 6.5 x 3.5 x 1.3 inches.

SG-622 *Order #3858* **$39.95**

RADIO STANDS

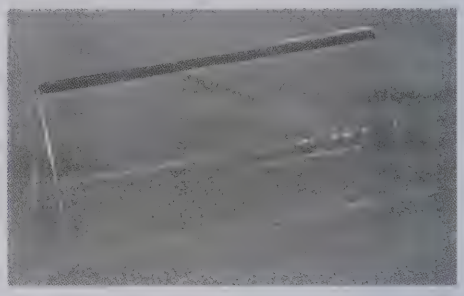
The **CLEAR MED** is a handy clear plastic stand supports your Grundig G3, G4, G6, G4000A at the optimum viewing angle. (The radios shown are not included). Size: 6.75 x 4.5 x 4.75 inches (5.2 inches on the slant).

CLEAR MED *Order #0022* **$8.95**



Translucent blue mini-stand for small portable radios such as the KA11, KA105 and SWP. 7" wide, 3" on the slant. Radio shown is not included.

BLUE MINI *Order #4270* **$6.95**



This 12" wide, large clear stand holds the bigger radios such as the CSW, E1 and S450DLX at an optimum viewing and operating angle.

CLEAR LRG *Order #3873* **$18.95**

SANGEAN PS-100

The **Sangean PS-100** Pillow Mate speaker sits comfortably under your pillow. You can listen to your radio without disturbing your partner. White with cord that terminates to a stereo mini-plug. 3.5 x 4 x 1 inches.

PS-100 *Order #0885* **$12.95**

See more ***Pillow Speakers*** on page 34

GO-BAG

This insulated bag is a great way to protect your scanner. There is plenty of room for your radio, batteries, accessories, directories and more. The top is zippered and it has a carry strap plus an open pocket on the front panel, a webbed pocket under the top cover and a webbed side pocket. 8 x 6 x 5". Blue.

Universal Go-Bag *Order #5733* **$7.95**

CLASSIC RADIOS

Are you looking for an older "classic" shortwave radio? The **Used Department** at Universal Radio contains an ever changing assortment of used amateur and shortwave radio equipment. Please visit our website to review our current offerings with photos for many key items. Our ***Radio Archive*** section includes an informative presentation of recently sold radios with values, specifications and photos. It's like a radio museum! Equipment changes daily and is subject to prior sale.

Universal Radio buys radios! If you have radio equipment you are not using, why not turn it into cash? Universal will purchase good, clean used equipment. Please call, email or write and tell us what you have to sell. We will provide an immediate quote (subject to inspection).

Hammarlund HQ-180-C

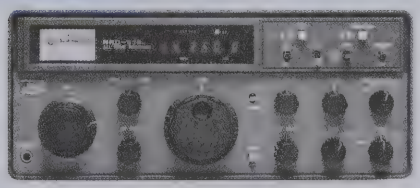
Sony ICF-2010

Lowe HF-150

Grundig Satellit 700

Drake R8B

J.R.C. NRD-515



➤ See ***Buying A Used Shortwave Receiver*** on pg. 126
➤ See ***Shortwave Receivers Past & Present*** on pg. 129

CommRadio

CR1a

The **CommRadio CR1a** communications receiver offers interesting capabilities, not previously available. The CR1a is a true SDR (software defined radio), but does *not* require a computer. Enjoy the benefits and performance of state-of-the-art SDR, but in a conventional radio package. The CR-1a SDR is independent of a host PC, using embedded digital signal processing technology provides a degree of portability and performance previously unavailable to the radio enthusiast. Coverage includes: 500 kHz-30 MHz, 64-260 MHz and 437-512 MHz in AM, SSB, CW, WBFM, NBFM modes. The incredible performance is combined with exceptional portability and ease of use. Features include: adjustable display brightness, memories, tuning dial lock, variable AGC attack, auto or manual bandwidth selection, built in speaker (bottom panel) and external speaker jack. Never has this level of HF monitoring performance been available at this size or this price. The new "a" version supports I/Q data and radio control on the USB port. The radio may be powered via USB or 6-18 VDC input. In both cases the optional Li-ion battery will be recharging, even when the radio is in use. All this American technology and capability is housed in a compact, metal case measuring 5.64 x 2.43 x 6.10" 1.8 lbs. Includes DC power cord and printed Owner's Manual. This radio requires 12VDC @500mA (see *#6229).*

CommRadio CR1a *Order #2002* **$599.95**

CR-1a OPTIONS

#	Item	Description	Price
5225	**CR1-BATT**	Internal Li-ion 2.6 Ah	**$23.95**
6229	**82-3950**	P. S. 12VDC 500 mA	**17.95**
2122	**UG255**	SO-239 to BNC Male	**2.95**
4758	**MFJ-1811**	Hinged Tels. BNC Ant.	**14.95**
1204	**RH-789**	Hinged Tels. BNC Ant.	**29.95**
4512	**ARC-110**	4 ft. Jumper BNC to SO-239	**17.95**
5733	**GO-BAG**	Universal *Go-Bag* (below)	**7.95**

SPECIFICATIONS

Receiver Coverage:	500 kHz - 30 MHz 64-260, 437-512 MHz
Modes:	USB/LSB, CW, AM, FM
Bandwidths by Mode:	AM 5/7.5/15 kHz SSB 1.8/2.2/2.6 kHz CW 0.5/1/1.8/2.2/2.6 kHz NBFM 15/25 kHz FM Broadcast 200 kHz
Auto Bandwidth:	AM 5/7.5/15 kHz SSB 1.8/2.6 kHz CW 1/0.5 kHz
Tuning Resolution:	1MHz, 100, 10, 1 kHz 100, 10 Hz.
Receiver Architecture:	HF dual conversion VHF/UHF single conv. with low-IF, I-Q digital sampling, 32-bit DSP w/ digital audio CODEC
DSP Demodulation:	DSB-AM, SSB, CW, WBFM, NBFM
Audio System:	Digital CODEC 8 Ohm 0.8 watts to 2.5" Internal Speaker or External Speaker jack 16 Ohms 40 mW to 3.5 mm stereo jack
AGC Attack Time:	Slow/Medium/Fast
Antenna Inputs:	LW-HF BNC 50 Ohm VHF-UHF BNC 50 Ohm
Display Types:	Amber OLED 64x1028 with EMI filtered lens Readable outdoors Adjustable brightness
Display Shows:	Frequency, Band, Mode, S-Units, Bandwidth, Power Status
Power Input:	USB Jack 6-18 VDC 2.1 x 5mm
Optional Intl. Battery:	Li-ion 2.6 Ah
Power Consumption:	<1.0 W headset <1.6 W full speaker vol.
USB Mini-B 2.0 Jack	Charges battery while operating radio. I-Q data & radio control Spectrum scope 200 kHz Software updates via CommRadio *Dropbox.*
ESD Protection:	ESD diodes at power jacks, USB port, keys and knobs.
Size:	5.64 x 2.43 x 6.10"
Weight:	1 lb. 12 oz.
Country of Mfg.	United States

ICOM

IC-R75-22

The **Icom IC-R75-22** provides full coverage from 30 kHz to 60 MHz; all longwave, medium wave and shortwave frequencies are supported plus extended coverage to include the 6 meter amateur band. Some innovative features of the R75 are: FM Mode Detection (*not* FM broadcast band), Twin Passband Tuning, Two Level Preamp, 99 Alphanumeric Memories, 2 Scan Edge Memories, Noise Blanker, Selectable AGC (FAST/SLOW/OFF), Clock-Timer, Squelch, Lock, Attenuator and backlit LCD display. Record output and record activation jacks are on the back panel. The R75 is an excellent single sideband receiver (SSB). The supplied 2.1 kHz SSB filter is suitable for utility, amateur, or broadcast SSB. However, two optional CW/SSB filter positions are also available (one per I.F.). Icom is currently shipping the **UT-106** DSP unit factory-installed providing Auto Notch and Noise Reduction! The IC-R75 comes with the AD-55S-12 external 100-240 VAC 50-60 Hz to 15 VDC power supply adapter. For more information please request a brochure, stop by our showroom or visit: **www.universal-radio.com**

SPECIFICATIONS

Frequency Range	30 - 60000 kHz
Power	12 VDC 1.1A (need #6032) 100-240 VAC 50-60 Hz
Antenna Impedance	50 ohm & Terminals
Selectivity (-6dB)	AM 6.0 kHz SSB/CW 2.1 kHz FM 12.0 kHz
Sensitivity	<0.16 µV CW/SSB (10 dB S/N) 1.8-30 MHz
Stability	7 PPM 1 to 60 mins. 1 PPM after 60 mins.
Intermediate Freqs.	1st IF = 69.0115 MHz 2nd IF = 9.0115 MHz 3rd IF = 455 kHz
Image Rejection	>70 dB (<30 MHz).
Memories	99 Alpha and 2 band edge
Audio Output	2 Watts at 8 Ohms 10%
Circuit Type	Triple Conv. Superhet.
Antenna Connectors	SO239 and terminals
Dimensions	9.5 x 3.7 x 9.1 inches 241 x 94 x 229 mm
Weight	6.6 lbs. net (3 kg)

OPTIONS

✦ **CT-17**	**CI-V Level Converter for Remote Control from PC**	*#2771*	$144.95
✦ **CR-282**	**High Stability Crystal Unit** (±0.5 PPM)	*#2137*	159.95
✦ **FL- 52A**	**CW/RTTY Narrow 500 Hz Filter 455 kHz IF**	*#0903*	209.95
✦ **FL-222**	**SSB Narrow 1.8 kHz Filter 455 kHz IF**	*#0327*	219.95
✦ **FL-100**	**CW/RTTY Narrow 500 Hz Filter 9 MHz IF**	*#2968*	119.95
✦ **FL-223**	**SSB Narrow 1.9 kHz Filter 9 MHz IF**	*#2312*	129.95
✦ **MB-23**	**Carry Handle**	*#1088*	14.95
✧ **DC-R75**	**Fused DC Power Cable** (non-Icom)	*#6032*	37.95
✧ **SWLRem**	**Remote Control Interface** (non-Icom, see website for details)	*#4425*	109.98

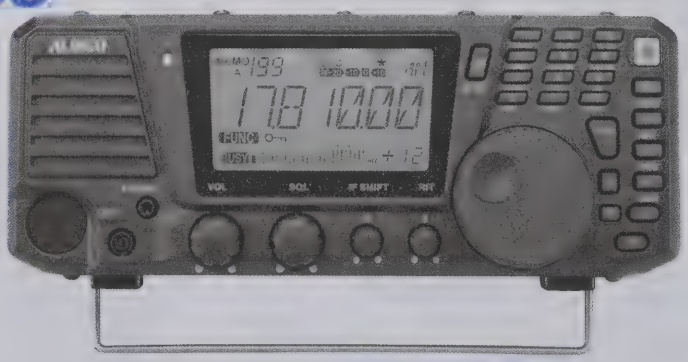
PRICING

Icom IC-R75-22 List Price $896.00
Icom IC-R75-22 Discount Price
Order #0012 ..... **Please call**

Important Pricing Note:
Please call our toll-free number 1 800 431-3939 or check our website for current Icom IC-R75 pricing and special promotions.

ALINCO

DX-R8T



The **Alinco DX-R8T** receiver covers 150 kHz to 30 MHz in SSB, CW, AM and FM modes. Features include: IF shift, band and memory scanning, attenuator, preamp, RIT and noise blanker. The front panel head is remotable up to 16 feet with the optional EDS-17 cable. Enjoy 600 alphanumeric memories (3 banks of 200 channels). There are rear panel connectors for external devices including IQ output for possible use in SDR applications, DRM, external decoding, etc. Supplied with DC cord and Owner's Manual. Requires 12 VDC at 1 amp. Please note that an AC power supply is not included with this radio. A 12VDC filtered 3 amp (or greater) power supply is required. We suggest the Pyramid PS-4KX. Size: 9.45 x 3.95 x 11.6 inches.

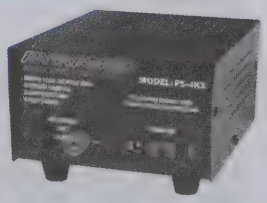
List $499.95 *Order #0084* **Please call**

DX-R8T OPTIONS

#	Item	Description	Price
5186	**EDS-17**	Head Ext. Cable 16 feet	$54.95
3664	**EDC-36**	Cigar Lighter DC Cable	24.95
1695	**ERW-7**	USB PC Interface Cable	45.95

PYRAMID

PS-4KX



The **Pyramid PS-4KX** regulated linear power supply provides 13.8 VDC at 3 amps continuous or 4 amps surge. 5 x 3 x 7.5 inches.

List $45.00 *Order #6083* **$39.95**

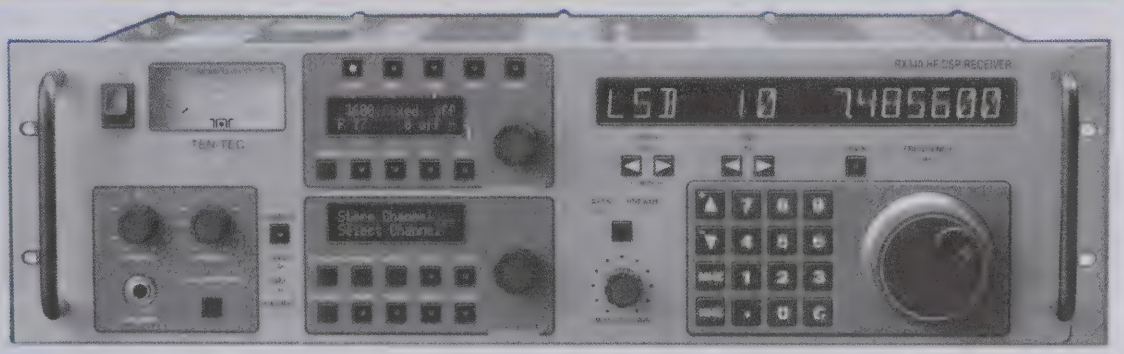
SPECIFICATIONS

Receiver Coverage: 30 kHz - 29.99999 MHz
Modes: USB/LSB, CW, AM, FM
Operating Temp. Range: +14° to +140° F
Frequency Stability: ±1ppm -10° to +50°C
Antenna Impedance: 50 ohms unbalanced
Power Requirement: 13.8 VDC ± 15%
Memory Channels: 600 alphanumeric
Memory Banks: 3 banks of 200
RIT Range: ±1.2 kHz
Current Drain Receive @13.8VDC: 1 amp,
Current Drain Squelch @13.8VDC: 0.7 amp
Dimensions (W, H, D): 9.45 x 3.95 x 11.6 inches
Weight: 9 lbs.
Receiver System: Double Conversion Superhet.
Sensitivity: SSB, CW: (0.15-1.8 MHz) 1µV
(1.8-30 MHz) 0.25µV
AM: (0.15-1.8 MHz) 10µV
(1.8-30 MHz) 2µV
FM: (28-30 MHz) 0.5µV
Selectivity:
SSB, CW: 2.4 kHz/-6 dB, 4.5 kHz/-60 dB
AM Narrow: 2.4 kHz/-6 dB, 4.5 kHz/-60 dB
AM, FM: 6 kHz/-6 dB, 18 kHz/-50 dB
Intermediate Freqs: 1st IF: 71.75 MHz
2nd IF: 455 kHz
Image rejection: More than 70dB
Audio Output: >2 Watts @8 ohms, 10% THD.

Please visit our website to view some interesting screen shots of DRM reception.

TEN-TEC

RX-340

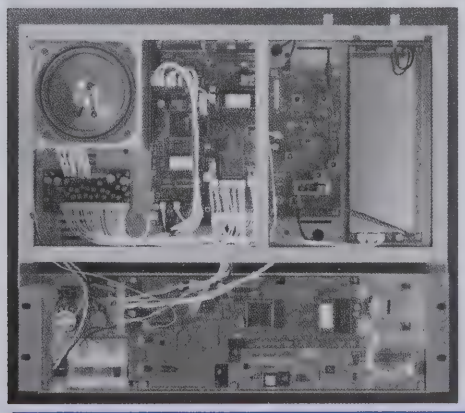


SPECIFICATIONS

Frequency Range	5 - 30000 kHz
Display Resolution	1 Hz
Power	97 - 264 VAC (47-440 Hz)
Consumption	35W typical
Antenna Input	50 ohm unbalanced BNC
Selectivity (-3dB)	57 from 0.1 to 16 kHz
Sensitivity	<.14 µV .5-30 MHz CW <.25 µV .5-30 MHz SSB <.56 µV .5-30 MHz AM (S+N/N -10dB, preamp on)
Frequency Stability	± 1 p.p.m.
I.F. Rejection	85 dB min (90 typical)
Image Rejection	80 dB min (90 typical)
Ultimate Rejection	70 dB min
3rd Order Intercept	+30 dBm typical
2rd Order Intercept	+75 dBm typical
AGC Attack/Hang/Decay	Mode dB/ms / sec / dB/sec Fast: 0.8/0/1200 Med.: 0.8/0/100 Slow: 0.8/0/25 Prog. .01-1/.01-99.9/.01-99.9
I.F. Output	455 kHz, Post DSP
LO Phase Noise	-120 dBc/Hz 20 kHz typ.
Remote	RS-232 Multi-drop DB25. 75 - 38400 baud
Dimensions	19.0"W x 5.25"H x 12.5"D
Weight	12.5 lbs.

BANDWIDTHS

100	350	1000	1800	3200	5600	9600
120	400	1100	1900	3400	6000	10400
150	450	1200	2000	3600	6400	11200
170	500	1300	2200	3800	6800	12000
200	600	1400	2400	4000	7200	12800
220	700	1500	2600	4400	7600	13600
250	800	1600	2800	4800	8000	14400
300	900	1700	3000	5200	8800	15200
(ISB fixed at 3.2 kHz, S-AM fixed at 6 kHz.)						16000



It has been said that there is no "perfect" shortwave receiver. But that was before the **Ten-Tec RX-340**. This communications receiver combines cutting-edge, state-of-the art technology, with excellent ergonomics and aesthetics. Digital signal processing (DSP) brings the performance and repeatability of expensive military grade communications receivers into the price range of top end commercial receivers for shortwave listeners. Tunable from 5 kHz to 30 MHz, it provides tuning steps and display resolution of 1 Hz. All three displays are blue-green vacuum fluorescent and provide unparalleled contrast and readability. The performance level of receivers in this class is possible only through extensive use of Digital Signal Processing. These designs utilize fewer analog circuits than traditional receivers. Powerful, specialized DSP microprocessors replace many of the discrete circuits with intensive software containing over 60,000 lines of code. High dynamic range analog stages provide first, second and third IFs (and 80 dB of AGC) where signals then hit analog to digital converters. Everything else is accomplished in DSP including all mode detection, IF filters, AGC (remaining 40 dB), adjustable BFO, passband tuning and noise blanker. An astounding 57 bandwidths from 100 Hz to 16 kHz are included. All filters have a shape factor of 1.5:1 or better (6 to 60 dB). USB, LSB, ISB, CW, AM, Synchronous AM and FM modes are built-in. Four AGC modes are provided. Users will be familiar with conventional Fast, Medium and Slow modes, but the "Programmable" mode is ground breaking. Users may build their own personal AGC characteristic by selecting attack, hang and decay rates. Manual control from the front panel is also adjustable over 120 dB range. A tunable Notch filter rejects unwanted signals in the passband. The receive front-end incorporates a built-in preselector with eight half octave bandpass filters. Switchable 10 dB preamp and 15 dB attenuator are also provided. The signal strength meter is calibrated in both S-units and dBm.

Little known to most shortwave listeners, TEN-TEC has been a supplier of commercial grade receivers for many years. Their RX-331 "black box" is used in military, diplomatic and commercial concerns worldwide. In this application multiple units run 24 hours per day, seven days per week without interruption. The RX-340 uses these field proven circuits along with a comprehensive front panel. This provides conventional manual operation while retaining all of the remote control aspects of the RX-331. A built-in multi-drop RS-232 interface permits remote operation at baud rates from 75 to 38400. Accessed from the rear panel DB-25 connector, the interface may be configured for single or multiple receiver applications. The complete command language is published in the receiver's manual so enterprising users can write their own remote control software. The RX-340 also includes Built-in Test or "BITE". This self-test capability will identify virtually all faults to the board level. Memory and Scan functions fall into four categories: a scratchpad memory, 100 memory channels, memory scan and sweep (F1 to F2 scan). Each memory channel retains the frequency, mode, IF bandwidth and BFO setting. The dwell time is programmable. Channel lockouts are provided and a Pause feature lets you interrupt scan momentarily. The Squelch works in all modes and adjusts over a 150 dB range.

The RX-340 features a built-in TCVCXO to provide ±1 ppm frequency stability across the entire operating range of 0 to 50 degrees C. Audio is delivered to a built-in speaker on the top panel, external speaker jack on the rear and the 1/4 inch headphone jack on the front. Separate volume controls are provided for the speaker and for the headphone. Fixed level 600 ohm audio is also provided on the rear panel. The front panel features a Lexan graphics overlay designed to last a lifetime. The chassis is aluminum with alodine plating on all parts to protect finish in less than ideal environments. The RX-340 mounts in a standard 19 inch rack. One year limited warranty. Made in Tennessee, U.S.A.

I - O CONNECTORS

Input	Antenna	BNC
	External Reference	BNC
	Power	IEC 3-pin
Output	Signal Monitor	BNC
	I.F.	BNC
	First Mixer	BNC
	Second Mixer	BNC
	Audio/Aux	DB 15 female
	Headphone	1/4" stereo
Both	RS-232	DB 25 female

PRICING

RX-340 HF Receiver
Order #0340 ..... $**4450.00**

REAB-340 USB/Ethernet Adapter
Order #3127 ..... $**274.95**

ERGO4 Software (not from Ten-Tec)
Order #4474 ..... $**134.95**

For more info. visit: **www.universal-radio.com**

RFspace SDR-IP

The **RFspace SDR-IP** a high performance software defined radio covering 10 kHz to 32 MHz. It utilizes the latest FPGA and analog to digital technology. The SDR-IP offers both upgradeable firmware and plug-in PC interface board. The SDR-IP uses a high performance 80 MHz, 16 bit ADC with both dithering and randomization for best performance. The output I/Q bandwidth is fully configurable via software. PC communications are handled over a 100 base-T port using 24 bit I/Q words. A TCP connection is used to control the radio and a UDP connection is used to transfer the data back to the PC. The Ethernet port allows easy interfacing to Windows, Mac OS, and Linux without the need of additional drivers. The use of IP protocol, allows the radio to be operated over the intranet. The SDR-IP comes with two rotary encoders to configure the IP address and other future options. The digital down converter used in the SDR-IP is fully configurable. It uses a Xilinx XC3S500E FPGA. The high performance receive modes use 32 bit precision. The analog front end uses a high dynamic range preamp with a bank of 10 preselector filters and 2 switchable attenuators. RF switching uses relays for better IMD. The HF antenna port also includes a spark gap for high voltage transients. The SDR-IP can be configured with a low phase noise 80 MHz encode clock. This oscillator can be locked to reference clocks like GPS and rubidium standards. When not externally locked, the oscillator has a stability of ±1 ppm. The phase noise at 10 kHz is -170 dBc/Hz typical.

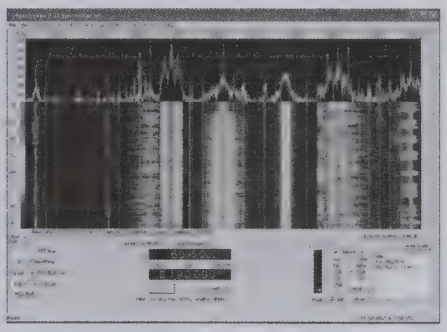
SDR-IP *Order #5121* **$2999.00**

Please note that all specifications, information and product drawing above are subject to change.

SDR-IQ

The **RFspace SDR-IQ™** with RF DSP offers unprecedented performance with a frequency coverage of 500 Hz to 30 MHz in 1 Hz steps. (Please note the low end tuning range is 500 Hz, not 500 kHz). It features the fastest and highest resolution plug and play spectrum display available. The SDR-IQ™ comes with the latest version of SpectraVue™ software CD (requires Windows 2000/XP/Vista). It supports AM, WFM, USB, LSB, N-FM, and CW with fully adjustable DSP Filter bandwidths and FFT sizes of 2048 to 262144 points. The resolution bandwidth is as low as 0.031 Hz. The SDR-IQ™ is the smallest SDR with RF DSP that samples the whole HF band at once and performs the initial filtering at a 67 MHz sample rate with 23 bit accuracy. It has a high performance *Analog Devices* 14 bit analog to digital converter and sends 16 bits of I/Q Data to the PC via USB (no messy soundcard cables required). The SDR-IQ is USB powered so no power supply is required. Works great with laptops running on batteries. It offers incredible receive performance and high resolution spectrum display capability. The rear panel has a USB port, serial port and BNC antenna jack.

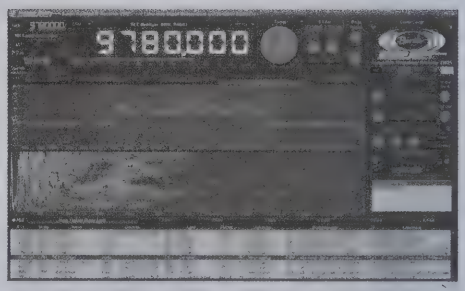
SDR-IQ *Order #0000* Discontinued



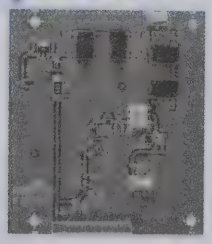
Bonito 1102S

The **Bonito 1102S** *RadioJet* shortwave receiver combines innovative design with the advantages of modern computer technology. It has a frequency range of 40 kHz to 30 MHz with an excellent sensitivity of .03 µVolts on a noise level of -137 dBm with an extreme resolution of 144 dB at a sampling of 24 kHz. The Noise floor is extremely low, because there are no active parts between the antenna and the ADC. Strictly speaking, this radio is not an SDR, although it is exclusively controlled by computer. So far no SDR has defined, controlled, read or computed anything like the *RadioJet*. Bonito *RadioJet* is a short wave receiver with a built-in USB audio device and a 24 kHz multichannel IM jack or to put it simply: The most obvious application of modern radio technology. The software has been designed in such a way that its size and its coloring can be custom-tailored to any screen. This can be achieved with the presets or user-defined. The center piece of this IF-receiver is the supplied software. It makes all the different applications possible. An IF-Input-Device is built into the RadioJet so that the radio is like an external USB-Audio recorder and an easy installation without a complicated driver is assured: simply plug and play. The receiver comes with the standard software and the following features: reception and recording of transmissions in USB, LSB, CW, AM, FM and DRM. All filters are completely variable and can have their waviness and notches drawn by hand with the equalizer. S-meter and spectroscope have an extremely accurate dBm-scale and can be calibrated. The rear panel has a USB port and BNC antenna jack. This device requires a USB cable (not supplied). 4.5 x 1.25 x 4 inches. Made in Germany.

1102S *Order #5789* **$649.95**



RFspace IF-2000



The **RFspace IF-2000 Revision-C** interface board adds an IF output at 10.55 MHz to the Yaesu FT-2000 and FT-950 transceivers. This board allows the interfacing of the transceiver to an RFspace SDR-IQ or panoramic adapter. The addition of an SDR (software defined radio) to the Yaesu radio greatly enhances its capabilities.

Here are some of the key enhancements of the RFspace SDR-IQ / IF-2000 board:

✔ Adds the most powerful panoramic adapter available for the Yaesu radios. Experience unprecedented speed, bandwidth and resolution.

✔ Adds a 190 kHz wide waterfall / spectrum display.

✔ Adds two additional AM/FM/CW/SSB demodulators.

✔ Allows the recording of 190 kHz of band to the computer hard drive centered at the radio VFO frequency.

✔ Allows the monitoring of HF and 6 meter frequencies.

✔ Adds the ability to monitor the transmitter spectrum.

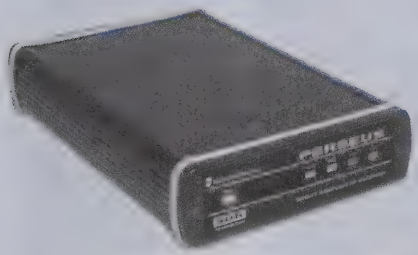
Please carefully note that this device is not a receiver, but does not fit into any other catalog classification. For full IF-2000 details please visit:

www.universal-radio.com

IF-2000 *Order #5432* **$149.95**

microtelecom

PERSEUS



The **Microtelecom Perseus** is a cutting-edge, multimode, software defined receiver covering 10 kHz to 40 MHz. Enjoy world class performance: 3rd order IP: +31 dBm, Sensitivity: -131 dBm, Dynamic Range: 104 dB (BW 500 Hz CW). Nine six-pole front end bandpass filters prevent overload of the A/D converter. There is a 3 step attenuator plus switchable low noise preamplifier. An impressive full span lab-grade spectrum display function is featured. An almost magical spectrum record feature allows you to record up to an 1600 kHz portion of radio spectrum for later tuning and decoding. A Wide/Narrow noise blanker has recently been added. The audio source is via your PC soundcard. The Perseus operates from 5 VDC and comes with an international AC power supply, AC plug converter, SO239 to BNC RF adapter, USB cable and CD with software and detailed manual. Made in Italy. Consider adding an SSB DCM converter for additional coverage. For full Perseus details and screen shots please visit:

www.universal-radio.com

Perseus *Order #0122* **Please call**

The **Shuttle Pro V2** hand controller adds great ergonomic versatility to your Perseus receiver. It allows one-handed access to nine fully programmable push buttons as well as a shuttle/jog knob for analog type tuning. The inner ring or jog rotates through 360 degrees and provides precision step-by-step control. The outer black ring or shuttle is rubberized and spring loaded, and facilitates fast up and down tuning. Instructions are included.

ShuttleProV2 *Order #5319* **$91.98**

SSB

The **SSB Electronic DCM** series receive converters provide exceptional sensitivity, large signal performance and high dynamic range to satisfy even the demanding users. The heart of the DCM series is an active, double-balanced broadband mixer with a typical Intercept-Point (IP3) of > 20 dBm at the input. The pre-stage of the converter uses a modern internally negatively fed back E-PHEMT IC, which exhibits a very low noise figure of 0.9 dB and first class linearity. Preselection and spurious suppression is assured by a 3-stage Helix-Filter. A new crystal driven mixing oscillator uses two selected FETs and several Schottky-Diodes for creating a spurious-free, low noise output signal. Input is a female N jack. Output is to a female BNC-socket. The operating voltage is 9 - 14 VDC 300 mA. Reverse voltage protected.

DCM SERIES CONVERTERS

#	Item	Description	Price
0000	**DCM- 2**	144-148 to 28-32 MHz	Disc
2174	**DCM- 70**	430-440 to 26-36 MHz	Disc
1867	**DCM-137**	136-138 to 28-30 MHz	**$199.98**

RFSpace

NetSDR

The **RFspace NetSDR** is a high performance networked software defined receiver covering 10 kHz to 34 MHz with a 1.6 MHz bandwidth. The NetSDR uses a high performance 80 MHz, 16 bit ADC with both dithering and randomization for best performance. The output I/Q bandwidth is configurable via software. PC communications are handled over a 100 base-T port using 24 or 16 bit I/Q words.

The NetSDR is a complete plug and play solution. As opposed to other SDRs in the market, there is no need for additional preamplifiers, preselectors or code development. The unit is compatible with the Moetronix SpectraVue and SDR-Radio software that will have you up and running in minutes. The software includes analog and digital mode demodulation and I/Q capture of spectrum at up to a 1.60 MHz BW. The SDR-Radio software allows the use of the NetSDR over the Internet. The full 1.6 MHz waterfall and demodulation audio can be transported via a 5 kB/s link. For those interested in writing their own applications, RFSPACE supplies a fully documented protocol for communicating with the hardware. There is no need to calculate the downconverter DSP parameters. The NetSDR just needs the center frequency, attenuator and preselector filter settings, output sample rate and mode to begin streaming data. Other solutions require complicated USB interfacing that is platform specific. The NetSDR utilizes straight TCP/IP and ethernet for all communications. This offers the highest possible performance due to the highly optimized ethernet drivers on PC, Mac and Linux systems.

The NetSDR packets are fully routable. This means that the receiver can be placed at remote locations. Multiple receivers can also be combined and their data transported over a higher data rate ethernet pipe using simple switches and routers. In this application, each NetSDR can be set to a different IP address or port.

NetSDR *Order #0383* **$1449.95**

The NetSDR may also be ordered with the ±1 ppm REFLOCK option factory installed.

NetSDR+01 *Order #1958* **$1998.95**

The NetSDR may also be ordered with the ±25 ppm REFLOCK option factory installed.

NetSDR+04 *Order #5930* **$1674.95**

The NetSDR may also be ordered with Dual Coherent Receive factory installed.

NetSDR+02 *Order #5716* **T.B.A.**

SPECIFICATIONS

Frequency Range: 10 kHz - 34 MHz
Digital Down Converter: Xilinx FPGA
Synchronization : Optional Frequency Only
PC Interface: Ethernet 100 base-T (UDP/TCP/IP)
Filters: 115+ dB 80% Alias Free BW
Decimation Rate: Variable 40-6400 (in 4 increments)
Output I/Q Bandwidth: 10 kHz to 1.60 MHz
DDC Flatness: <0.5 dB
Dynamic Range: 104+ dB
MDS Preamp Off (500Hz): -129dBm 1.8 - 30 MHz
MDS Preamp On (500Hz): -130dBm 1.8 - 30 MHz
Analog to Digital Converter: 16 bit with Dither
Preselection: 10 Filters
Attenuators: 0, -10dB, -20dB, -30dB
Sample Rate: 80.000 000 MHz
Memory: 65536 x 16 bit samples
External Radio Control: Built-in RS-232 port
Dimensions: 8 x 1.5 x 6 inches
Power: 5 Volts DC @ 1.5 Amp
Connections:
BNC RF In, BNC Ext Ref, BNC IF Out, RS-232, USB Setup, Stereo In, Ethernet, Power, RX Mute.
Compliance: CE, FCC, IC

Products, technical data/technology, and services of RFSPACE INC. ("RFSPACE") are subject to U.S. export controls under the applicable laws and regulations of the United States. Commodities may not be exported or re-exported, either directly or indirectly to the following countries: Cuba, Iran, Sudan, North Korea or Syria. Diversion contrary to U.S. law is prohibited. In addition, commodities may not be exported or re-exported to entities and persons that are ineligible under U.S. law to receive U.S. product, technology and/or software.

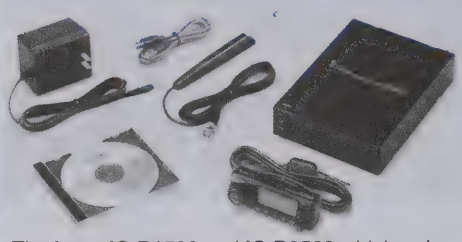
ICOM IC-R6-16

The compact **Icom IC-R6-16** is big on coverage, tuning 100-824 kHz, 851-866.995 and 896-1309.995 MHz in AM, FM Narrow and FM wide modes. The triple conversion circuit provides amazing sensitivity for the size. It has 1300 alphanumeric memories storing: frequency, mode, step size, duplex direction and offset, CTCSS tone, tone squelch and skip settings. And it can scan up to 100 channels per second in 7 different scan modes. Frequency steps include 5, 6.25, 9, 10,12.5, 15, 20, 25, 30, 50, 100 or 200 kHz. It features a large backlit LCD display. Audio Output is 150 mW 8 ohms 10% Dist. The efficient circuit offers extended operation. The IC-R6 comes with wrist strap, belt clip, two AA NiMH cells, AC adapter and SMA flexible antenna. 2.3 x 3.4 x 1.2" 7.1 oz.
List $246.00 *Order #1006* **$199.98**

The economy **IC-R6 *Sport*-16** does **not** include the AC adapter or two AA NiMH batteries.
List $236.00 *Order #2006* **$189.95**

The **IC-R6-20** model is the same as the R6-16, but *without* the cellular gaps. It can be purchased by the Federal government or for export only.
List $246.00 *Order #1336* **$208.95**

ICOM IC-R2500 IC-R1500



The **Icom IC-R1500** and **IC-R2500** wideband receivers have been discontinued by Icom in the consumer version. We have a few units left of the government (restricted) versions. Please call and ask for *Government Sales*.

IC-R6 OPTIONS

#	Item	Description	Price
5435	**BC-194**	Charge adapter stand	**29.95**
3208	**BC-196SA**	AC Adapter for BC194	**26.95**
5436	**CSR6**	Win Clone Software CD	**42.95**
0498	**CP-18A**	Cigarette Plug & Filter	**29.95**
2771	**CT-17**	Level Converter	**144.95**
0967	**LC-146A**	Carry Case	**21.95**
0918	**OPC-474**	R6 to R6 Clone Ser.Cbl.	**16.95**
1180	**OPC-478**	R6 to PC Clone Ser.Cbl.	**44.95**
4886	**OPC-478UC**	R6 to PC Clone USB C.	**52.95**
0940	**SP-13**	Mono Earphone	**4.95**
3209	**SP-27**	Tube Earphone	**26.95**
0531	**SMA-BNC**	Converts BNC to SMA	**4.99**
5642	**ARC6**	Butel prgm software CD	**29.95**

ICOM IC-RX7

The **Icom IC-RX7-05** is a slim and smart wideband receiver that tunes from 150 kHz to 1300 MHz (less cellular and gaps) in AM, FM-N and FM-W modes. A total of 1650 scannable, alpha-numeric memories are featured.

This model is discontinued, but most accessories are still available.

OPTIONS

#	Model	Item Description	Price
0000	**BC-149A**	AC Wall Charger	Disc.
5125	**BP-244**	Li-ion Battery 3.7V	**34.95**
0000	**BP-262**	Cell Holder (3xAA)	Disc.
0498	**CP-18A**	Cigarette Plug & Filter	**29.95**
5127	**CS-RX7**	Software with OPC-478UC *and* OPC-1637 USB cable	**24.98**
2771	**CT-17**	Level Converter	**144.95**
5129	**LC-170**	Carrying Case	**11.98**
5126	**MB-112G**	Belt Clip	**4.98**
0918	**OPC-474**	RX7-RX7 Clone Cable	**16.95**
0531	**SMA-BNC**	SMA to BNC Adapter	**4.99**

Icom accessories may all be viewed at:
www.universal-radio.com

ICOM IC-R20 IC-R20 *Sport*

The **IC-R20-11 GOVT** model is the same as the R20-06, but *without* the cellular gaps. Includes BC153SA and BP-206. The **R20-11 GOVT** can be purchased via government or qualifying commercial purchase order or for export only.
Order #1442 **$579.95**

Tune in the world where ever you go. The **Icom IC-R20-06** has extremely wide coverage from 150 kHz to 3304.999 MHz (less 824-849 & 869-894 MHz cellular). Modes of reception include: FM, WFM, AM, USB, LSB, CW. This radio has two VFOs with dual watch capability. A built-in 32 MB IC audio recorder can record 1, 2 or 4 hours of reception (playback quality will be less on 2 or 4 hour settings). A total of 1250 memories are featured: 1000 regular, 25 scan edge and 200 auto-write scan. And this is Icom's fastest scanning radio at 100 channels per second in VFO mode. Enjoy three types of priority watch: Memory Channel Watch, Memory Scan Watch and VFO Scan Watch. CTCSS/DTCS/DTMF decode is built-in. The large two line dot-matrix LCD can be programmed for 8 character channel names. You can "see" your signals with the built-in band scope. The sweep range can be set from ±14 kHz to ±1400 kHz. Other advanced features include: Voice Scan Control (opens squelch only when a modulated signal is detected), Auto Squelch, Attenuator, key lock, RF Gain, Noise Blanker, ANL and AF filter. A built-in ferrite bar antenna improves medium wave reception. Weather channels and weather alert (USA version only) are featured. CI-V PC control compatibility is supported with optional CT-17. PC programming is available via the optional CS-R20 software CD (with USB cable). The *Set Mode Menu* lets you tailor the radio's operation to your taste including: Priority Watch, Key-touch beep, beep level, power save, NB/ANL/AF filter functions, AM antenna selection, scope audio, dial speed, etc. The IC-R20 comes with: BC-153SA wall charger, BP-206 Li-ion battery pack, MB-98 belt clip, battery spacer, BNC telescopic antenna and wrist strap.
Order #0000 Discontinued

The **Icom IC-R20-*Sport*-06** version does *not* include wall charger or the Li-ion battery pack. Instead, this version operates from 4 alkaline AA batteries (not supplied). The charger and Li-ion battery may be purchased separately and used.
List $624.00 *Order #6020* **$499.95**

SPECIFICATIONS

Frequency Range	150 kHz - 824 MHz 849 - 869 MHz 894 - 3304.9 MHz
Modes	AM, FM-N, FM-W, CW, LSB and USB
Frequency Step	.1, .5, 1, 5, 6.25, 8.33, 9, 10,12.5, 15, 20, 25, 30, 50 , 100, 200 kHz
Sensitivity	AM 1 µV 5-200 MHz[1] CW .25 µV 5-200 MHz[1] FM-N .32µV 5-200 MHz[2] FM-W 1µV 75-200 MHz[2] FM-W 2.2µV 200-340 MHz[2]
Selectivity	AM, FM-N 12 kHz -6 dB FM-W >150 kHz -6 dB SSB, CW >3 kHz -6dB
Antenna Jack	BNC (50 ohms)
Output Power	100 mW 8 ohms 10% Dist.
Physical	2.3 x 5.7 x 1.2" 10 oz.

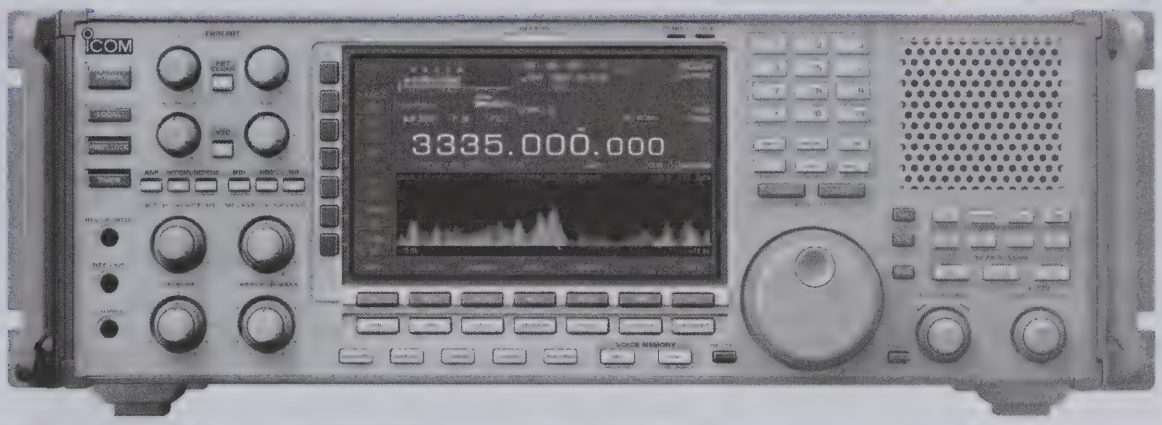
[1](10 dB S/N) [2](12 dB SINAD)

OPTIONS

#	Model	Item Description	Price
1140	**BC-153SA**	AC Slow Charger	**$29.95**
1445	**BC-156**	AC Rapid Charger	**79.95**
3678	**BP-206**	Li-ion Battery 3.7V	**54.95**
0498	**CP-18A**	Cigarette Plug & Filter	**29.95**
1493	**CS-R20**	Clone CD & USB Cable	**49.95**
2771	**CT-17**	Level Converter	**144.95**
3517	**MB-86**	Swivel Belt Clip	**8.95**
1454	**LC-158**	Carrying Case	**34.95**
0940	**SP-13**	Mono Earphone	**4.95**

ICOM

IC-R9500



The **Icom IC-R9500-02** raises the bar for professional receivers. Only Icom's wideband receiver technology can achieve this high specification with 5 kHz to 3335 MHz coverage (less cellular). In HF bands, it has 110dB wide dynamic range and +40dBm IP3. Even in the 144/440 MHz and above 2GHz ranges, it has +5dBm IP3 capability. This high specification means the IC-R9500 allows you to listen to weak signals between strong adjacent signals. For the BPF (Band pass filter) unit, the R9500 uses stable mechanical relays and large inductors instead of switching diodes and small coils which can cause distortion. This combination reduces distortion at the primary stage of signal processing.

The IC-R9500 incorporates two independent, 32-bit floating point DSP units, one for the receiver and the other for the spectrum scope. By having two independent DSP units, the radio will respond to operator changes in an instant, as each DSP unit has a dedicated function.

The IC-R9500 has high resolution normal and wide spectrum scope functions. The normal spectrum scope observes ranges from ±2.5kHz to ±5MHz, while the wide spectrum scope observes wider frequency ranges. When using the normal spectrum scope, the digital scope filter width is selectable from 200Hz to 20kHz, allowing you to find a weak signal right next to strong ones. The sweep speed is selectable. Also, there is a setting to allow for specific scope edges to center the span on the receiving frequency. The peak search function automatically moves the marker to the peak point on the scope screen. In addition to these features, the scope has 3 levels of attenuator (10/20/30dB). (While using wide spectrum scope function, AF output is muted).

The DSP controlled noise blanker significantly reduces pulse type noise. The IC-R9500 has two noise blanker memories; you can set attenuation width, depth and blank time parameters by each channel and allow switching between channels depending on the operating mode. The digital IF filter allows the operator to adjust the filter shaping (sharp or soft), filter bandwidth, and center frequency characteristics, without missing the received sound. The digital twin PBT narrows and shifts the IF passband, and efficiently eliminates interfering signals.

The IC-R9500 has five roofing filters before the 1st amplifier. You can select the filter widths from 240kHz/50kHz/15kHz/6kHz/3kHz, depending on operating mode. The 50kHz roofing filter allows you to receive NOAA weather satellite APT pictures in FM mode.

The synchronous AM (S-AM) detection provides less distorted audio than normal diode detection and it is useful when fading occurs or signal level is low. The IC-R9500 can create exactly the same frequency as the carrier signal by using the DSP unit. In addition, upper or lower sideband is selectable for S-AM demodulation for eliminating interference from adjacent strong signals.

The two-point digital manual notch filter reduces more than 70dB at two points with adjustable filter width (wide, middle, narrow). It means two strong beat signals can be eliminated at once even while using the auto notch filter.

The IC-R9500 has 10 VFO channels; you can tune and store operating frequency, mode, filter width and other settings. For example, in VFO-1 for memories in the 7MHz band, VFO-2 for VHF marine band, VFO-3 for 1200MHz band, etc. Quickly change the operating bands by pushing the 10-keypad. When you change the VFO channel, the last setting is automatically stored to the channel used before.

The IC-R9500 has an internal digital recorder capable of storing received communications. While the recording times vary depending on recording quality, even in HQ (high quality) mode it provides up to 60 minutes (approx.) of recorded time. 1000 memory channels store frequencies, modes, filter width and tuning steps. Memory channels are grouped into memory banks. Independent memory and bank knobs are on the front panel. By connecting to a USB keyboard, you can directly edit channel names, etc.

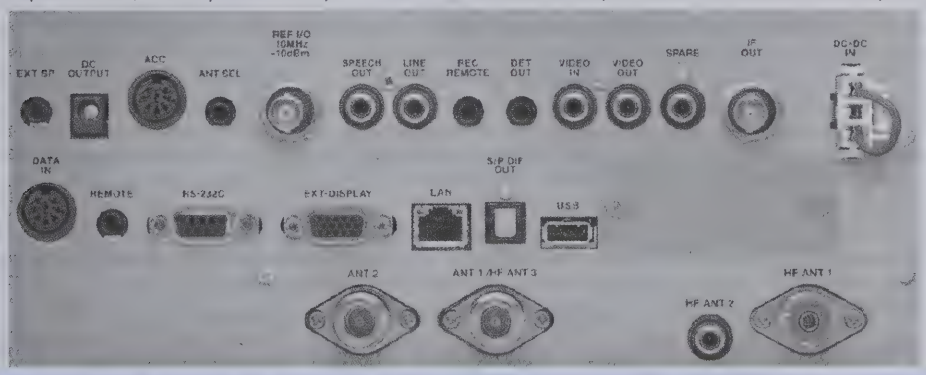
Numerous scanning and search functions are available to make your operations easier than ever. The IC-R9500 scans 40 channels per second in memory scan mode. Other supported scan modes include: Program scan, F scan, Priority scan, Selected mode memory scan, Selected memory scan and Auto memory write scan.

Additional outstanding features include:

- 4 antenna connectors: an SO-239 type and a phone (RCA) connector for below 30MHz, two type-N connectors for above 30MHz
- Reverse power protection (HF band only)
- AFC function compensates for frequency shifts (FM mode only)
- CW/AM modes: auto tuning function
- Optional P25 digital mode reception
- VSC (Voice Squelch Control)
- S/PDIF out jack • Video input/output.

Icom IC-R9500-02 Wideband Receiver
List 17000.00 *Order #0095* **Please Call**

The full-coverage **Icom R9500-06** is similar to the R9500-02, but *without* the cellular frequency gaps. This version can be purchased by end-users exempt under 18 U.S. Code Section 2512(2) [government agencies and cellular providers].
Icom IC-R9500-06 Wideband Receiver
List 17500.00 *Order #2684* **Please Call**



OPTIONS

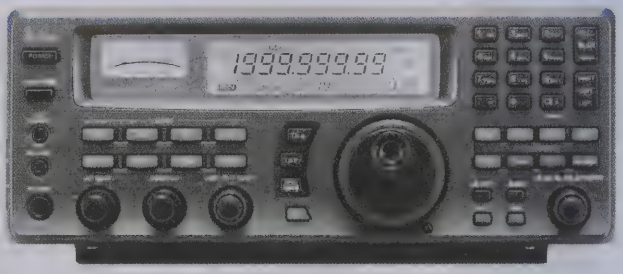
#	Item	Description	Price
1945	**AH8000**	Omni Antenna (pg. 45)	$269.95
2771	**CT-17**	Level Converter	144.95
0000	**SP-20**	External Speaker	Disc.
4747	**UT122**	APCO25 Decode Unit	219.95

ICOM IC-R8500-32K

SPECIFICATIONS

Frequency Range	100 kHz - 1999.99 MHz
Power	13.8 VDC 2A or 110 VAC
Antenna Impedance	50 ohm unbalanced
Selectivity (-6dB)	FM-N 5.5 kHz FM/AM 12 kHz FM-W 150 kHz SSB/CW 2.2 kHz
Sensitivity	0.2 µV 2-30 MHz 0.32 µV 30-999.9 MHz 0.32 µV 1240-1300 MHz SSB (10 dB S/N)
Spurious Rejection	>60 dB 1.5-30 MHz >50 dB 30-1000 MHz
IF Shift Range	±1.2 kHz
Dynamic Range	107 dB
Frequency Stability	±100 Hz <30 MHz ±3 PPM >30 MHz
Circuit Type.	Triple Conversion except Dual Conversion on WFM
Audio Output	2 Watts 4 - 8 Ohms.
Dimensions	11.3 x 4.4 x 12.16 inches (287x111x308 mm)
Weight	17.7 lbs. (22 lbs. ship)

The **Icom IC-R8500-22 GOVT** model is full coverage (without the usual 824-849 / 869-894 MHz cellular frequency gap) and can be purchased via Federal government order or for export *only*.



The **Icom IC-R8500-32K** produces performance, coverage and sophistication rarely seen outside the military commercial market. Covering 100 kHz to 1999.99 MHz, this receiver does cover it all; and more importantly; it does it *well* throughout this extraordinary range. Most wideband receivers tend to perform only modestly below 30 MHz. The IC-R8500 (and IC-R9500) are clear exceptions to this rule. Reception modes include AM, LSB, USB, CW, FM-N and FM-W. This receiver is equipped with IF Shift and Auto Peak Filter functions ... a first for receivers in this class. The IF shift effectively rejects nearby signals in the SSB mode. The APF can select between two bandwidths and serves as a tone control in the FM mode and can also selectively boost signals in the CW mode. Triple conversion and advanced RF circuits achieve an improved dynamic range of 107 dB and an intercept point of 27.5 dBm. Separate band pass filters minimize cross modulation and provide high sensitivity in the .1 to 30 MHz range. The IC-R8500 employs a newly designed PLL circuit which provides tuning and readout resolution to an amazing 10 Hz. A host of tuning steps are featured: 10, 50, 100 Hz, 1, 2.5, 5, 9, 10, 12.5, 20, 25, 100 kHz and 1 MHz. In addition you can program your own tuning step (.5-199.5 kHz). And what a memory system! 1000 channels are available, organized in 20 banks of 40 channels, plus 100 skip channels and 100 Auto Write Memories. Other refinements include: Noise Blanker, S and Center Tune Meter, RF Attenuator, LCD Dimmer, Clock-Timer, Record Jack and Recorder Activation Jack, Selectable AGC, Main Dial Tension adjustment and three separate antenna connectors (covering two ranges: .1-30 and 30-2000 MHz). Supplied with AC adapter or may be run from 12 VDC. We are proud to offer this exceptional receiver. This receiver is available to Federal government or export customers only.

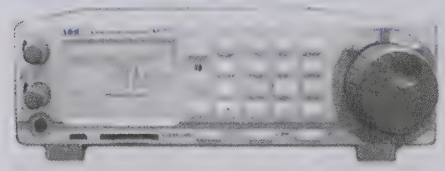
OPTIONS

#	Item	Description	Price
1945	**AH8000**	Omni Antenna (pg. 45)	$269.95
0000	**CR293**	High Stability(±0.5 ppm)	Disc.
0903	**FL-52A**	CW Filter 500 Hz	209.95
1088	**MB-23**	Carry Handle	14.95
1696	**SP23**	External Speaker	199.95
0000	**UT102**	Voice Synthesizer	Disc.

PRICING

IC-R8500-32K List Price $2400.00
IC-R8500-32K Discount Price
Order #0663 ..... **Please Call**

AOR AR-DV1



The AOR AR-DV1 wideband communications receiver covers 100 kHz to 1300 MHz (less cellular on U.S. consumer version) in traditional analog modes (SSB, CW, AM, FM, S-FM, W-FM) as well as various digital modes. In fact, we know of no other radio in this category that can decode Icom's D-Star mode, Yaesu's new C4FM mode, Alinco's digital mode, NXDN, P25 Phase1, etc. Features include: 2000 Memories (40x50), Memory Scan, AM Synchronous Detection, Noise Reduction, Notch, Digital Data Display, Clock, Calendar, Alarm and Timer. The SD/SDHC jack supports logging functions. There is also a micro USB port. This radio will support field firmware updating. High performance is achieved with direct conversion below 18 MHz and triple conversion superheterodyne above 18 MHz. This compact radio is only 4.5 x 1.275 x 5.5 inches. The rear panel features a single BNC antenna jack, speaker jack, aux jack and 12 VDC input jack.

Order #6369 **T.B.A.**

This device has not been approved by the F.C.C.
This device may not be offered for sale or lease or be sold or leased until approval of the F.C.C. has been obtained.

AOR AR-ALPHA

The **AOR AR-Alpha** takes professional monitoring to a new level. It is designed to meet the increasingly complex needs of monitoring professionals. Continuous coverage from 10 kHz to 3.3 GHz. Digital signal processing is employed at both the IF stage and demodulating stage. Fast frequency processing is achieved by means of FFT. Dual communications ports on the back panel support both RS-232C and USB connection. Modes of reception include: WFM (in stereo selectable de-emphasis), NFM, AM (Synchronous AM, diversity synchronous AM), ISB, RZSSB, USB, LSB, CW, P25, TV (FM, AM NTSC/PAL). A wide range of IF filters are available: 200 Hz, 500 Hz, 3 kHz, 6 kHz, 15 kHz, 30 kHz, 100 kHz, 200 kHz, 300 kHz. The AGC may be set for FAST, MEDIUM, SLOW and OFF. A stunning 6 inch diagonal high resolution TFT color display supports spectral display (with water fall) as well as TV reception. The spectrum display can show up to 1 GHz of bandwidth! This 19 inch wide radio can be employed in both base and field environments. The Alpha requires 13.8VDC at 2.5 amps. The back panel features two antenna inputs: ANT 1 (N), ANT 2 (SO239). There is a 10.7 MHz (BNC) output jack. Other jacks include: AF Out Right and Left (RCA), Mute (RCA), External Speaker (3.5mm mini) and Accs. 2. The Alpha comes with rack ears for mounting the radio in a standard 19 inch rack. This model is available in both government and consumer (cellular telephone frequencies blocked) versions.

Full coverage government/export version.
Alpha U *Order #1036* **$9989.95**

Cellular blocked consumer version.
Alpha B *Order #4953* **$9949.95**

AR8200MkIIIB

- 500 kHz - 3000 MHz (less cellular)
- All Mode
- 1000 Memories
- 12 Characters per Memory
- 20 Search Banks
- Priority Channel
- Dual VFOs
- Thumbwheel Tuning Dial
- Programmable Step Sizes
- Signal Strength Meter
- Band Scope
- Backlit LCD & Keypad
- Battery Save Function
- Attenuator
- True Carrier Insertion SSB
- Removable MW Antenna
- Optional Slot-Cards
- Computer Control Port
- 12 VDC Input Jack

The **AOR AR8200Mark IIIB** is an improved handheld receiver that covers 500 kHz to 3000 MHz (less cellular) in: Wide FM, Narrow FM, Super Narrow FM, Wide AM, Standard AM, Narrow AM, USB, LSB and CW. Bandwidths are: FM-W 150 kHz, FM-N/AM-W 12 kHz, AM/FM-S 9 kHz and AM-N/SSB 3 kHz (-6 dB). The side keypad has 4 arrow keys presented as a single rocker. 1000 Alpha memories in 20 banks are supplied. The scan-search rate is 37 steps/second. The state-of-the-art AR8200 even accepts plug-in slot card options (see below). This may be the best engineered and most capable handheld scanner ever! Now with TCXO, 8.33 kHz air-band step and more. Includes: Four NiMH 1500 mAh AA cells, AC charger, belt-clip, auto cigarette lighter power cord, removable medium wave (AM) antenna and RA8600 Telescopic Whip antenna. This radio may also be operated from a 12 VDC external source. There is a 1/8 inch (3.5mm) mini earphone jack on the right side. 2.4 x 6 x 1.5 inches.

List $909.00 *Order #0083* **$719.95**

OPTIONS

#4755	**CC8200A**	Serial PC Cable[1]	**$104.95**
#3462	**CC8200B**	Serial PC Cable[2]	**104.95**
#3805	**CR8200**	Record Cable[1]	**72.95**
#2207	**CR8200A**	Record Cable[2]	**73.95**
#3802	**IF8200**	Interface Cable (no plug)	**28.95**
#0000	**LC8200**	Leather Case	Disc.
#3807	**SC8200**	Vinyl Case	**16.95**
#4931	**USB8200**	PC USB Cable[1]	**90.95**
#2824	**USB8200A**	PC USB Cable[2]	**92.95**

[1]For B s/n <554251 [2]For B s/n >554251

OPTIONAL SLOT CARDS

#1641	**CT8200**	CTCSS Squelch	**$119.95**
#1829	**EM8200**	External Memory	**99.95**
#0000	**RU8200**	IC Sound Recorder	Disc.
#1412	**TE8200**	Tone Eliminator	**74.95**
#0422	**VI8200**	Voice Inversion	**104.95**

Please note that the VI8200 is *only* available to export or government customers.

AR8600MkIIB

SPECIFICATIONS

Frequency Range	530 kHz - 3000 MHz (less cellular).
Modes	WFM, NFM, SFM, WAM, AM, NAM, USB, LSB, CW.
Power	13.8 VDC 0.5 Amps
Antenna Impedance	50 ohm unbalanced
Selectivity (-6dB)	3/9/12/20/25/150/380 kHz
Sensitivity	2µV 1.9.-30 MHz AM
Memories	1000 (20 banks)
Physical	6.1bx2.25x7.7 in 4.5 lbs

The **AOR AR8600Mark IIB** is a versatile receiver which can be used virtually anywhere, mobile, base or transportable ... powered from an external 12 VDC power supply, optional d.c. lead from a 12V vehicle or from an optional internally fitted NiCad battery pack. A strong twin metal case with die cast front panel characterizes the multipurpose role. All mode receive capability is provided including Single Side Band with programmable tuning steps down to a resolution of 50 Hz with the frequency established by a highly accurate TCXO. Center stage is a custom multi-section backlit LCD, numeric keypad, navigation keys, rotary tuning control and separate controls for volume and squelch control. The LCD can display alphanumeric text comments. The radio is manufactured with a metal chassis inside a metal cabinet to provide excellent screening characteristics and great robustness. The front panel is also manufactured from die-cast aluminium. Step may be programmed by the operator in any receive mode using multiples of 50 Hz (i.e. 5 kHz, 12.5 kHz or even 1.25 kHz). Extensive step-adjust and frequency offset facilities are also provided to ensure tracking of the most obscure band plans. A wide frequency coverage is available from 530 kHz to 3000 MHz (less cellular) with actual minimum acceptable frequency of 100 kHz. All mode receive: WFM, NFM, SFM (Super Narrow FM), WAM, AM, NAM (Wide, standard, Narrow AM), USB, LSB and CW. A 3.0 kHz SSB filter is employed with true carrier reinsertion resulting in non-offset frequency readout for easy tuning of SSB transmissions. An attenuator and noise limiter are also featured. Computer control is available via a 9-pin RS232 serial port. Free software is available as a download from the AOR web site. The AR8600 comes with an AC power supply, RA8600 telescopic antenna, medium wave plug-in antenna and manual.

List $1049.00 **AR8600MkIIB** *Order #1860* **$959.95**

NOTE: Full coverage, unblocked versions of AOR models are available for export or gov't. customers.

AR-ONE

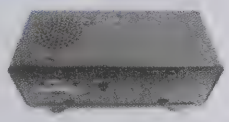
The **AOR AR-ONE** is a professional wideband communications receiver covering 10 kHz to 3.3 GHz in AM, FM, NFM, WFM, LSB, USB, CW modes. It provides laboratory grade stability of 0.1 PPM 14°~122°F and 1 Hz frequency display. It is optimized for surveillance and monitoring applications. The AR-ONE is designed for computer controlled operation and up to 99 receivers can be controlled by a single PC. (Software not supplied). Other advanced features include: ten VFOs and 1000 memories (10x100), attenuator and preamp. Scan and search with pass and delay are fully supported. The rear panel features two RS232 ports, multi-IF outputs (455 kHz and 10.7 MHz) and N type antenna input jack. The compact size of this radio is conducive to mobile or fixed applications. Includes Owner's Manual, AA5000-1 120 VAC 60 Hz power supply and DC power cord. 6.2 x 2.3 x 10.8 inches 5 lbs. Please visit our website for full specifications. The AOR AR-ONE models can be purchased for government or for export *only.*

AR-ONE *Order #4560* **$5199.95**

The **AOR AR ONE-C** is a special frequency and phase coherent version. See website for details.

AR-ONE-C *Order #1686* **$5299.95**

AR-ONE OPTIONS



The **AOR EXT-ONE** (shown) allows the AR-ONE head to be remoted via a 15 foot cable facilitating certain mobile applications.

#3680	**EXT-ONE**	Remote Kit	**$349.95**
#3455	**MM8600**	Mobile Bracket	**$104.95**
#0657	**ARD25**	APCO25 Decoder	**$539.95**

Does not decode APCO25 on trunked systems.

ACCESSORIES

#0495	**P25-8600**	APCO25 Decoder	**$249.95**
#1316	**BP8600**	NiCad Battery Pack	Disc.
#1584	**DC8600**	DC Cord	**12.95**
#3851	**MF-2.5**	Collins 2500 Hz filter	Disc.
#0000	**TV8600**	NTSC Video TV Board	Disc.

OPTIONAL SLOT CARDS

#1641	**CT8200**	CTCSS Squelch	**$119.95**
#1412	**TE8200**	Tone Eliminator	**74.95**
#0000	**RU8200**	IC Sound Recorder	Discontinued
#1829	**EM8200**	External Memory	**99.95**
#0422	**VI8200**	Voice Inversion	**104.95**

Please note that the VI8200 is *only* available to export or government customers.

AR5001DB

The **AOR AR5001DB** wideband communications receiver covers 40 kHz to 3150 MHz (less cellular) in: USB, LSB, CW, Wide FM, Narrow FM, AM and AM Synchronous modes. APCO P-25 mode is available optionally. 2000 Alpha memories store frequency, mode, step, de-emphasis, AGC mode, CTCSS, DCS, auto notch, antenna port and attenuator settings. Bandwidths are: 200 Hz, 500 Hz, 3 kHz, 6 kHz, 15 kHz, 30 kHz, 100 kHz, 200 kHz and 300 kHz (-3 dB). There are two dual frequency modes. In the dual offset mode you can listen to two frequencies in the same band (± 5 MHz). In the regular dual frequency mode you can listen to a VHF/UHF frequency and an HF frequency, even if different modes. The special tri-frequency mode allows HF reception combined with the dual offset mode! This radio features five VFOs, DTMF tone decode, CW pitch control, Auto notch, noise reduction, noise blanker, keypad entry, a precision signal meter and SD card port. It also has a high resolution spectrum display function. The AR5001D comes with a well filtered DC supply, manual and SD card. 8.66 x 3.825 x 12 inches 11.1 lbs.

Order	Model	Frequency Coverage	List Price	Your Price
#5001	**AR5001DB**	40 kHz to 3.15 GHz (less cellular)	$4799.00	**$4289.95**
#2682	**AR5001DU**	40 kHz to 3.15 GHz ***Restricted***	$4799.00	**$4399.95**

The restricted model **AR5001DU** is available for government or export only. Universal Radio does accept government purchase orders. Please call and ask for *Government Sales.*

ACCESSORIES

#5449	**P25-2300**	APCO25 Decoder	**$249.95**
#4815	**IQ5001**	I/Q Unit & Software	**$699.95**
#1213	**GP5001**	GPS Freq. Ref. Unit	**$429.95**
#1934	**ARL2300**	IP Control Unit	**$849.95**
#2343	**AS5001**	Antenna Switch	**$177.95**

AR6000

The new **AR6000** receiver is similar to the AR5001DU, but tunes up to 6000 MHz. See the Universal website for details. This model can be purchased for government or for export *only.*
List $7599.00 *Order #6045* **Please call**

SR2000AB

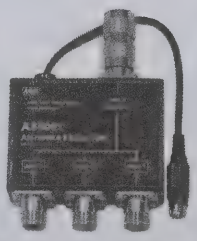
The **AOR SR2000AB** is a DSP powered spectrum display unit with high quality RF front-end, for professional users. The IF signal originating from the RF's front end is digitally processed, analyzed by high-speed Fast Fourier Transform, to allow a 40 MHz wide bandwidth spectrum to be displayed in real time. The FFT search can scan 10 MHz in as little at 0.2 seconds to instantly display transmitted signals. The RF front end covers a wide range from 25 MHz to 3 GHz (less cellular) with triple conversion superheterodyne in AM, NFM, WFM and SFM modes. This receiver can additionally receive and display video (NTSC/PAL/SECAM). Other features include: 1000 memories (10x100), 40 search bank memories, menu-driven operation plus RS232 and USB ports.
SR2000AB *Order #5085* **$3049.95**

The full coverage, unblocked version can be purchased for government or for export *only.*
SR2000AU *Order #2627* **$3069.95**

ACCESSORIES

#5161	**P25-2000**	APCO25 Decoder	**$249.95**
#4256	**CR5000**	Tape recorder cable	**Disc.**

AS5001



The **AOR AS5001** antenna selector is designed for use exclusively with the AR5000, AR5001 and AR-ALPHA series receivers. With the AS5001 attached, ANT1, ANT3 and ANT4 each goes through the ANT1 socket. The ANT2 socket is not affected and a shortwave antenna must be connected to the ANT2 socket. Connectors are N type and this device is powered by the receiver.
List $179.95 *Order #2343* **$177.95**

ARL2300

The **AOR ARL-2300** External IP Control Unit is an Ethernet network interface that permits the connection of the AR2300 or AR5001D directly to a computer network. It can subsequently then be connected to the Internet if desired. Basic control of the radio over the network is supported. All five VFOs may be controlled and spectrum display is available. Your mode, bandwidth, attenuator, step size and antenna selection can be viewed and controlled.
List $935.00 *Order #1934* **$849.95**

Although the SR2000A and SR2200 are listed in the *Wideband Receiver* section of this catalog, please note that they do not cover shortwave.

AR2300B

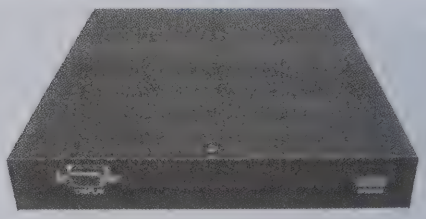
The **AOR AR2300B** is a wideband black box receiver that covers 40 kHz to 3150 MHz (less cellular) in: USB, LSB, CW, Wide FM, Narrow FM and AM modes. APCO P-25 mode is available optionally. 2000 Alpha memories store frequency, mode, antenna port and attenuator settings. Bandwidths are: CW 500 Hz, SSB 3 kHz, AM 6 kHz, FM 15 kHz, FM-Wide 200 kHz (-3 dB). The supplied AR2300 Windows® software provides powerful control functions. The AR2300 can be controlled from today's netbook PCs.
List $4119.00 *Order #2300* **Please call**

The **AR2300U**, unblocked version can be purchased for government or for export *only.*
List $4119.00 *Order #2302* **Please call**

ACCESSORIES

#5449	**P25-2300**	APCO25 Decoder	**$249.95**
#4815	**IQ5001**	I/Q Unit & Software	**$699.95**
#1213	**GP5001**	GPS Freq. Unit	**$429.95**
#1934	**ARL2300**	Ext. IP Control Unit	**$849.95**

SR2200



The **AOR SR2200** is a DSP powered VHF/UHF receiver unit covering from 25 MHz to 3 GHz with triple conversion superheterodyne in AM, NFM, WFM and SFM modes. Thanks to a well designed RFU, the generated IF signal of 10.7 MHz is of high linearity. Moreover, the demodulated signal is amplified to a high-definition audio (AF) signal, which can be output to an external speaker (not supplied) for superb sound. There are 1000 memories in ten banks. The rear panel features both an RS232 port and a USB port. The 8 conductor Accessory Output jack contains: Discriminator Out 5VDC @30mA Max., AF out 120mV 600 ohms, AF out 60mV 600 ohms and 5VDC @30ma Max and ground. The supplied SR2200 CD includes the manual, simple control software and drivers. 8 x 1.2 x 9 in. 4 Lbs. This device requires 12 VDC at 500 ma. DC cord included. The AA7000 AC adapter is available as an option. The special order SR2200 can be purchased for government or for export *only.*
List $1899.00 *Order #0156* **$1599.95**

ACCESSORIES

#3302	**AA7000-1**	AC Adapter 120VAC	**$79.95**

AOR ARD300

The **AOR ARD300** is a digital decoder that will bring the world of digital modes to your wide band receivers. It decodes many amateur digital modes such as those used by Icom, Alinco and Yaesu. It also decodes APCO P25 voice signals used by many governments worldwide. Audio output is provided to a ¼" headphone jack on the front panel and a speaker built into the top panel. Supported modes include:

- ✔ D-Star Icom GMSK AMBE
- ✔ Alinco GMSK AMBE
- ✔ Yaesu C4FM AMBE+2
- ✔ Digital CE C4FM AMBE+2
- ✔ P25 (Phase 1) C4FM IMBE
- ✔ Icom/Kenwood NXDN C4FM AMBE+2

The ARD300 is compatible with the AR5001D and many other receivers that have either 10.7 MHz or 45.05 MHz output. Requires 10.7-16 VDC @ 300 mA. With: AC adapter, DC power cable, IF cable, audio cable and printed manual.

Order #6116 **$819.95**

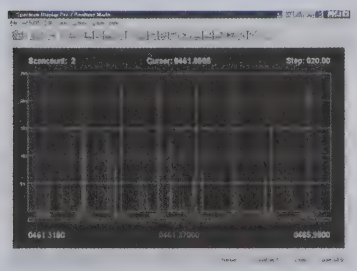
AOR RF-6G

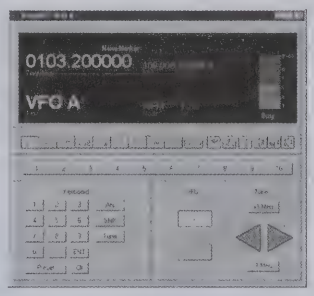
The **AOR RF-6G** is a super wideband tuner for your high-end signal intercept system. It provides excellent tuning characteristics needed for professional signal analysis and signal strength measurement. The RF-6G may be integrated into high-end monitoring systems dedicated to wide-area radio monitoring, interference detection and investigation, field-strength measurements, frequency analysis, radio propagation research or close range detection of illegal eavesdropping devices. Coverage is 500 kHz to 6 GHz. The ultra-fast switching synthesizer operates in under 3 ms. Stability of ±0.1 PPM is achieved. RF to IF gain is +30 dB. The 45.05 MHz IF analog output offers 20MHz (±10 MHz) of bandwidth for external peripherals. Precise factory calibration ensures that the IF output is correlated to the antenna input within only ±2 dB, and this is on the entire 500 kHz to 6 GHz range.

List $5999.00 *Order #6384* **Please call**

The AOR RF-6G may be purchased via Federal government purchase order only.

BUTEL SOFTWARE





The sophisticated Butel software supports memory/search banks and auto-mode bandplan. Includes a professional spectrum analyzer application and other useful tools. Requires: Windows (see our website for current version requirement), 2MB Video, HDspace, CD Drive, COM Port [USB not supported in all versions].

#	Item	For Radio	Price
4963	**ARC 15BA**	Bearcat BCT15	$39.95
0832	**ARC 300**	GRE PSR300/400	29.95
5597	**ARC 310**	GRE PSR310/410	29.95
2288	**ARC 396BA**	Bearcat BC396	39.95
1675	**ARC 404**	GRE PSR100/200	19.95
5098	**ARC 500**[1]	GRE PSR500/600	39.95
1386	**ARC 898T**	Bearcat BC898	39.95
5198	**ARC 996**	Bearcat BC996	39.95
6205	**ARC 8200V2**	AOR AR8200/8600	39.95
5336	**ARC XT BA**	BC346XT/396XT/396XT	39.95
5645	**ARC PATROL**	Homepatrol-1	29.95

[1]**Special Note:** The ARC500 will also work the Whistler WS1040/WS1065 scanners.

ALINCO DJ-X11T

The **Alinco DJ-X11T** wideband receiver covers 50 kHz to 1299.995 MHz (less cellular) in AM, FM wide, FM narrow, SSB and CW modes. The illuminated LCD display supports two lines. In addition to frequency information, it will also show the operating mode, memory channel, battery strength, signal strength and a number of other user-selected operating parameters. The keypad is backlit. Six types of memory banks are supported. The DJ-X11T even supports simultaneous dual frequency reception giving you the ability to concurrently listen with the main band and sub band (with some frequency limitations). Please note that sub band coverage is 118-174 MHz and 336-470 MHz. The F tuning function allows you to automatically tune very strong, nearby signals. The built in MW ferrite bar antenna provides good AM band reception. The DJ-X11T features 1200 memory channels and three scan speeds are available. The supplied SMA antenna is removable. Other features include: Beep On/Off, ext DC input jack (6VDC) and battery-low icon. This radio's firmware may be updated over the web (with optional cable and software). This radio comes with the EBP-174 3.7V lithium ion battery, AC adapter, SMA flexible antenna, belt clip and hand strap. 2.4 x 4.17 x 1.5 inches 8.3 oz.

List $399.00 *Order #4011* **Call or view website**

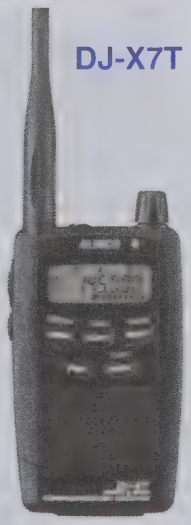
OPTIONS

#	Item	Description	Price
1620	**EBP-174**	Li-ion 3.7V 600 mAh	$54.95
4697	**EDH-33**	Cigar Filter Cord	17.95
4183	**EDS-12**	Wired Remote	34.95
1477	**ERW-4C**	PC Interface Cable RS232	38.95
1695	**ERW-7**	PC Interface Cable USB	45.95
2535	**ERW-8**	PC Intf.Cable USB mini	44.95
1309	**ESC-50**	Carry Case	24.95

VIEW OPTIONS
To view a photo of each Alinco option, please visit the Universal Radio website.

GOVT. - EXPORT
Contact Universal for information on Alinco radios for government or export applications.

ALINCO DJ-X7T



The **Alinco DJ-X7T** covers 100 kHz to 1299.995 MHz (less cellular) in AM, FM wide and FM narrow modes. The illuminated LCD display is easy to read and also shows the operating mode and memory channel. The DJ-X7T features 1000 memory channels and can clone to other DJ-X7 units with optional cable. This radio has four user-selectable antenna choices: an internal AM bar antenna, an internal SW bar antenna, the earphone cable may be used as antenna or the external, supplied SMA whip antenna terminal may be activated. Each DJ-X7T comes standard with: EDC-126 AC charger adapter, EBP-58N Lithium-ion battery, removable EA-131 SMA flexible antenna, antenna cap and EME-25 curl-cable earphone. 2.4 x 4 x 0.7 inches 3.7 oz.

List $199.95 *Order #3077* **$189.95**

OPTIONS

#	Item	Description	Price
2086	**EBP-58N**	Li-Ion 3.7V 600 mAh	$31.95
2216	**EDH-32**	Cigar Filter Cord	18.95
2259	**ESC-38**	Carry Case	14.95
1477	**ERW-4C**	PC Serial Cable	38.95
0531	**SMA-BNC**	SMA to BNC Adapter	4.99
4526	**2.5S-3.5S**	2.5mm-3.5mm Adapter	2.69

VIEW OPTIONS
To view a photo of each Alinco option, please visit the Universal Radio website.

GOVT. - EXPORT
Contact Universal for information on Alinco radios for government or export applications.

uniden

Bearcat

BC125AT

- 29 - 30 Ham Band 10 M
- 30 - 50 VHF Low
- 50 - 54 Ham Band 6 M
- 108-137 Aircraft
- 137-144 Federal Gov't
- 144-148 Ham Band 2 M
- 148-174 VHF High Band
- 225-380 Mil. Aircraft
- 400-420 Federal Gov't
- 420-450 Ham Band 70 Cm
- 450-470 UHF Band
- 470-512 UHF "T" Band

The **Bearcat BC125AT** is an affordable 500 channel, ten bank scanner with great features. Frequency coverage is 25-54,108-174,225-380, and 400-512 MHz. It has Uniden's new Close Call™ RF Capture Technology that instantly tunes to signals from nearby transmitters. The Priority Scan function scans the channels you have designated as priority channels. The Delay function helps prevent missed replies during 2-way conversations. There are ten service banks with preset frequencies for: Police, Fire/Emergency, Ham, Marine, Railroad, Civil Air, Military Air, CB Radio, FRS/GMRS/MURS and Racing. The backlit LCD display makes for easy night time operation. Operates from two AA cells (not supplied). Use alkalines for long life or rechargeables for economy. Comes with: AC adapter, belt clip, flexible BNC antenna and Owner's Manual.

List $179.95 *Order #0125* **$129.95**

uniden

Bearcat

BC345CRS

The **Uniden Bearcat BC345CRS** is your perfect bed side companion, covering VHF-Low, Commercial Air, VHF-High, Military Air Band and the UHF (406-512) band. Plus it gets regular AM and FM. Enjoy 500 scanning channels in ten banks plus10 for AM and 20 for FM. There is an alarm clock. Service search allows quick access to common police, fire, ambulance, aircraft, amateur radio, and marine radio frequencies. The controls on the BC345CRS are easy to use and the backlit display is very readable, even at night. External jacks on the rear panel include: BNC antenna jack, AM antenna terminals, earphone jack and external power. The BC345CRS comes with: AC adapter, telescopic antenna, AM Loop antenna and Owner's Manual. Insert three AA alkaline cells (not provided) for power backup. Size: 8.25 x 6.125 x 3.125".

List $139.99 *Order #6042* **$99.95**

Using a scanner in a vehicle is restricted in some states.

uniden

Bearcat

BC75XLT

- 29 - 30 Ham Band 10 M
- 30 - 50 VHF Low
- 50 - 54 Ham Band 6 M
- 108-137 Aircraft
- 137-144 Federal Gov't
- 144-148 Ham Band 2 M
- 148-174 VHF High Band
- 406-420 Federal Gov't
- 420-450 Ham Band 70 Cm
- 450-470 UHF Band
- 470-512 UHF "T" Band

The **Bearcat BC75XLT** 300 channel (10x30) scanner is a great value. Frequency coverage is 25-54, 108-174, and 406-512 MHz. It has Uniden's Close Call® RF Capture Technology that instantly tunes to signals from nearby transmitters. The Priority Scan function scans the channels you have designated as priority channels. The Delay function helps prevent missed replies. There are ten service banks with preset frequencies for: weather, police, fire/emergency, marine, racing, civil aircraft, amateur radio, railroad, CB and other (FRS/GMRS/MURS). Other features include keypad entry, earphone jack, key lock, battery low alert, battery save and backlit LCD display. Operation is from two AA cells (not included) providing flexibility in choice of batteries: Alkaline for long life or rechargeable NiMH batteries for economy. It is important that you select the correct battery type via the slide switch in the battery compartment. NiMH type batteries can charge while in the scanner. NiMH AA batteries may be charged from a USB power source (such as a PC) or the optional USB AC adapter via the included USB cable. The BC75XLT comes with: belt clip, flexible BNC antenna, USB charging cable and printed Owner's Manual.

List $139.95 *Order #3075* **$99.95**

uniden

BC355N

The **Uniden Bearcat BC355N** is a scanner covering 13 preset search bands including VHF Air and the 800 MHz Public Service band. It is preprogrammed and is user programmable. It has six preprogrammed service bands plus 300 user-programmable private channels. Advanced features include: Turbo Search, one-touch weather, channel lockout and narrowband channels. The rear panel has a BNC antenna jack and a 3.5mm mini external speaker jack. The bottom of the radio has a flip-out tilt-stand. This radio comes with: BNC type telescopic antenna, wire window antenna with suction cups, AC adapter, cigarette lighter DC power cord, *Operating Guide* and mounting bracket. 5.4 x 1.7 x 5.75" 1 lb. 6.5 oz.

List $149.99 *Order #2355* **$104.95**

uniden

Bearcat

BC346XTC

- 29 - 30 Ham Band 10 M
- 30 - 50 VHF Low
- 50 - 54 Ham Band 6 M
- 108-137 Aircraft
- 137-144 Federal Gov't
- 144-148 Ham Band 2 M
- 148-174 VHF High Band
- 406-420 Federal Gov't
- 420-450 Ham Band 70 Cm
- 450-470 UHF Band
- 470-512 UHF "T" Band
- 806-956 800 MHz Band (less cellular)
- 1240-1300 Ham Band

The **Bearcat BC346XTC** features third generation TrunkTracking III technology supporting Motorola Systems Type I, II, II/I (hybrid), EDACS Systems FM, NFM, and SCAT plus LTR Systems. The BC346XTC has many innovative features including Uniden's exclusive Close Call™ RF Capture Technology and there is EDACS ESK support. The BC346XTC uses a dynamically allocated memory system, allowing the user to program up to 9000 channels. While traditional scanners have been limited to only ten banks, the BC346XTC groups channels into systems, allowing for up to 500 systems to be programmed and scanned simultaneously. Systems can still be quickly enabled or disabled using the 0-9 keys, and each system can have up to 10 groups of channels that are also available for quick selection. Uniden's exclusive Close Call™ RF Capture Technology zeroes in on nearby transmissions without the need for programming, even when the BC346XTC is in other modes, scanning, searching or holding on a frequency. You get VHF low, VHF High, VHF Air, UHF, 800 MHz Public Service (less cellular) and even the 1.24-1.3 GHz amateur radio ham band. Other refinements include: a 64 x 128 full dot matrix LCD, SAME weather alert, backlit display, CTCSS/DCS rapid decode. There is a GPS/Remote Interface Jack (4pin mini type). This supports GPS for location-based scanning, location alerts and crows-flight navigation (GPS not supplied). Requires 3 alkaline AA cells (not included). Your BC346XTC comes with belt clip, SMA antenna, wrist strap, and *Owner's Manual* on CD. 5.35" x 2.4" x 1.22".

Order #2346 **Please Call**

KAITO ELECTRONICS INC

KA12AIR

The **Kaito KA12AIR** lets you monitor the civil VHF air band (118-138 MHz) wherever you are! It also receives the FM broadcast band 76-108 MHz. This radio features a built-in clock, key lock and 100 station memories. Six tuning modes are available: manual, keypad, auto, ATS, memory, memory entry. Requires two AA batteries (not included) or can operate from 5-6 VDC. Comes with: earbuds, wrist strap/clip stand. 4.4 x 2.8 x 0.8 inches.

List $66.00 *Order #5012* **$44.95**

uniden Bearcat BCD396XT

The **Bearcat BCD396XT** with TrunkTracker IV™ technology, offers APCO 25 digital capability and also operates on analog systems. You also get Close Call™ RF Capture Technology, Dynamic Memory Management, Fire Tone-Out as well as 25,000 channels. Frequency coverage includes: 25-512, 764-776, 794-956 (excluding cellular), 1240-1300 MHz in AM/FM/NFM/WFM modes. Search steps are: 5, 6.25, 7.5, 8.33, 10, 12.5, 15, 20, 25, 50 and 100 kHz. There is a 64 x 128 full dot matrix LCD with multi-color back light. Also features: P25 One-Frequency Trunk, EDACS ESK support, Close Call Temporary Storage, Network Access Code support, temporary lockout, configurable start-up, individual channel volume offset, keysafe mode, priority ID scan on trunked systems, CTCSS/DCS and quick-access search keys. External jacks for: SMA antenna, headphone, DC power and 4 pin remote PC. This radio may be operated from either three NiMH (supplied) or alkaline (not supplied). Be sure to correctly set the battery-type switch when installing batteries. Includes: 3 NiMH AA cells, AD-1001 AC adapter, SMA rubber antenna, wrist strap, DB9 serial PC cable, belt clip, BNC/SMA adapter and *Owner's Manual* on CD. 2.4" x 1.22" x 5.35".

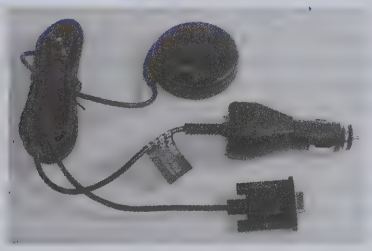
Order #4396 **Please Call**

USB1

The **Uniden USB1** is a USB cable that will be required if your PC does not have an RS232C serial port. It works with many Uniden scanners such as the BC246T, BCD396T/XT, BCD996T, SC230 and BCT15. The USB drivers are available on the Uniden website.

Order #4764 **$29.95**

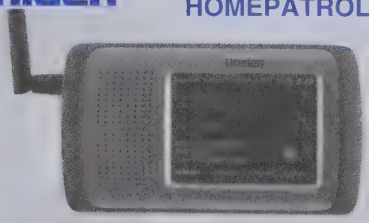
GARMIN GPS18xPC



The **Garmin GPS18xPC** is a GPS receiver for the Homepatrol. This high-sensitivity, 12-parallel-channel, WAAS-enabled GPS receiver comes with an integrated magnetic base. The puck-like receiver is 2.4 inches in diameter. Includes a cigarette lighter power cord. Your Homepatrol will know where it is and program itself accordingly.

Order #5696 **$109.95**

uniden HOMEPATROL-I HOMEPATROL-II



The **Uniden Homepatrol I** introduced ease of use, performance and features previously not available. Programming is easy. Just enter your zip code into the color touch-screen and the HomePatrol searches within a 10 mile radius of the center of that zip code. Or enter the city, and the range is 20 miles from the center of the city. If you use the AutoLocate feature, that range increases to 30 miles. Use it as a base or portable unit, and coverage is great, tuning 25-54, 108-512 and 758-960 MHz (less cellular) in AM, FM and FM wide modes. TrunkTracking EDACS (N/W), LTR, Motorola (analog/mixed/digital) and APCO P25 are supported. If you have a compatible GPS (not included), this radio will even know where it is and have the appropriate frequencies available. A micro SD card is included to store your favorite frequencies. The Replay feature instantly replays the transmissions you just heard (30 to 240 seconds). The Record function allows recording longer intercepts for later review. Although the initial set-up is very easy and automated, you can also use a configuration menu to fine tune the radio to your preferences. The Homepatrol comes with: *Quick Reference Guide,* SMA antenna, AC adapter, car adapter, base stand, computer cable and 4 rechargeable NiMH AA cells. The *Sentinel* software and *Owner's Manual* can be downloaded from the Uniden website. 5.9 x 3.3 x 1.5" 10.6 oz.

List $549.99 *Order #0738* **Please Call**

The **Homepatrol II** adds APCO 25 Phase2 capability and is recharged exclusively via the USB port. (AC and car adapter are *not* included).

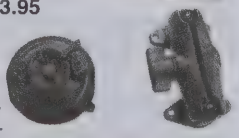
List $649.99 *Order #6420* **Please Call**

BCKHP-1

The **Uniden BCKHP-1** is a simple plastic bracket designed to hold the Uniden Homepatrol-I/II. It features two mounting holes and includes nuts and bolts.

Order #1404 **$13.95**

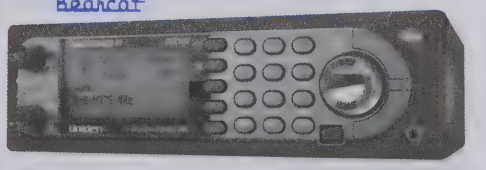
WBHP-1



The **Uniden WBHP-1** is a suction type windshield mounting kit for the Homepatrols. This kit includes the BCKHP-1 and hardware, although not shown above.

Order #3924 **$39.95**

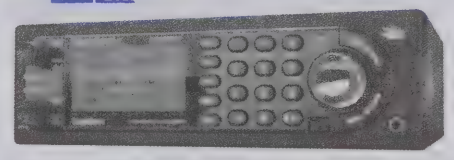
uniden Bearcat BCT15X



The **Uniden Bearcat BCT15X** is a GPS-enabled scanner that automatically selects nearby radio systems for scanning (GPS not supplied). The BCT15X also offers Uniden's unique BearTracker system, which alerts mobile users to public safety activity in their area as well as Close Call® RF Capture Technology that automatically locks onto nearby signals with no programming necessary. The GPS-enabled feature offered by the BCT15X provides automatic system selection, which permits the scanner to turn system reception on or off depending on the user's location, and allows the user to customize the scanner display to show location-based information. In addition, when a GPS unit (not included with this scanner) is connected to the BCT15X, the scanner will send alerts at areas of special interest, such as dangerous intersections, school zones, or general points of interest. This model supports TrunkTracker III systems: Motorola Type I/II/IIi Hybrid, EDACS and LTR analog trunk systems. It features 9000 channels. Please note that the BCT15X does *not* have TrunkTrackerIV or APCO 25 capability. Comes with: AD-1009 AC Adapter, Cigarette Lighter Cord, DC power cord, mounting bracket, push-on telescopic BNC antenna, PC serial cable and Manual on CD. 7.25 x 2.2 x 6.06 in. 3.5 lbs.

List $299.95 *Order #0015* **$199.95**

uniden Bearcat BCD996XT



The **Uniden Bearcat BCD996XT** is a state-of-the-art scanner radio with Trunk Tracker IV™ and automatic scanning capabilities. This is a GPS-enabled scanner (GPS not supplied), allowing the radio to automatically select nearby radio systems for scanning. The BCD996T also offers APCO 25 digital capability, allowing consumers to monitor the activities and signals of city and government service departments. The BCD996T also offers Close Call™ RF Capture Technology, Dynamic Memory Management, Fire Tone-Out, and Multi-site programming as well as 25,000 channels and a frequency range of 25 MHz to 1.3 GHz (excluding cellular). Other recent enhancements include band scope function, multi-color display backlit, NAC decoding, Key safe mode and channel alert (tones and backlight color). Included items: AD1009 AC adapter, cigarette lighter adapter power cord, mobile mounting bracket, DIN-E sleeve, push on telescopic antenna, PC DB9 serial cable and *Owner's Manual* on CD.

List $699.95 *Order #1996* **Please Call**

uniden BCD536HP

The **Bearcat BCD536HP** is Uniden's new flagship mobile scanner - which incorporates two firsts. Like the BCD436HP, it is the first mobile scanner to include the ease of use of the HomePatrol-style database. Simply enter your zip code. The second innovation is WiFi connectivity. Listen to and control your scanner using your smartphone or tablet. Other features include:

A supplied **4 Gigabyte microSD** card holds the USA and Canada database and leaves room for hundreds of hours of audio recording.
Programmable Alert LED lets you set a specific color to alert you when a channel becomes active.
TrunkTracker V with support for APCO Project 25 Phase I and Phase II, X2-TDMA, Motorola, EDACS, and LTR Trunked Radio Systems.
Quick Key access to 100 Favorites Lists.
Discovery Modes helps you find new channels on trunked systems and frequency ranges.
Analysis Modes include Band Scope, RF Power Plot, Trunked System Analysis, and EDACS/LTR LCN Finder.
Flexible Easy Channel Selection using Zip Code or GPS. Pick the kinds of channels you want to hear and tell the radio where you are.
Easy Scan Control using the dedicated System, Department and Channel Hold buttons.
Complete Front-Panel Programmability — create custom Favorites Lists.
Temporary Avoid lets you quickly silence unwanted systems, departments, or channels.
Backlight-on-Squelch option allows the backlight to remain on during an entire transmission.
Date/Time indication on display with time stamping for recordings.
Close Call® RF Capture automatically tunes the scanner to nearby transmissions.
NOAA Weather Alert with SAME.
Two-Tone Paging with up to 32 tone slots.
USB PC Connectivity.
Serial GPS input for location-based scanning.

List $699.95 *Order #4536* **Please Call**

GO-BAG

This insulated bag is a great way to protect your scanner. There is plenty of room for your radio, batteries, accessories, directories and more. The top is zippered and it has a carry strap plus an open pocket on the front panel, a webbed pocket under the top cover and a webbed side pocket. 8 x 6 x 5 inches. Blue with Universal Radio logo.

Universal Go-Bag *Order #5733* **$7.95**

uniden BCD436HP

The **Bearcat BCD436HP** with TrunkTracker V™ technology, offers APCO Project 25 Phase I and Phase II, X2-TDMA, Motorola, EDACS, and LTR Trunked Radio Systems. It shares some of the innovative features of the Homepatrol such as Zip Code programming and bandscope display. The included 4 GB SD card includes the USA/Canada frequency database. You get full 31 band frequency coverage. External jacks are provided for: SMA 50 ohm antenna, 3.5 mm headphone (not provided), USB. This radio may be operated from either three NiMH (supplied) or alkaline (not supplied). The BCD436HP includes: three NiMH AA cells, SMA-BNC adapter, microSD card (installed), SMA rubber antenna, wrist strap, USB PC cable, belt clip and printed Owner's Manual.

Order #0436 **Please Call**

uniden BC-GPSK

The **Uniden BC-GPSK** serial GPS receiver provides a simple solution to connecting a GPS to your Uniden location-based scanner or other NMEA-compatible device. This high-sensitivity, WAAS capable unit provides industry-standard NMEA 0183 output. This compact GPS design includes a magnetic base to easily secure to your vehicle. It includes a cigarette lighter power cord. Its weatherproof design allows outside mounting for best satellite signal reception. This device will continually tell your scanner where it is, so it may select the appropriate frequencies for the area you are passing through. Great for long car trips.

Please note that if you are using this GPS unit with the BCD436HP or other compatible hand-held Uniden scanner, you will also need to purchase the BWZG1844001 cable, sold separately (see below).

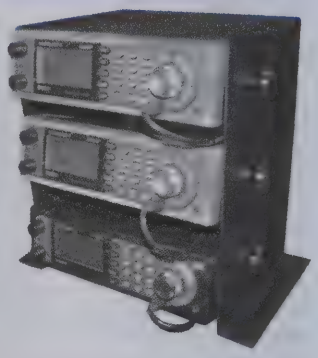
Uniden BC-GPSK *Order #6349* **$89.95**

Uniden GPS to scanner cable.
BWZG1844001 *Order #2620* **$19.95**

REFERENCE MANUALS

Please see page 112 for *Easier To Read Manuals*
Please see page 125 for *Nifty Mini-Manuals* and *Nifty Reference Cards.*

SPECTRUMFORCE



The **Spectrum-Force Base Scanner Mounts** are built with strong sheet-metal, allowing you to attractively mount and display one or two base or base/mobile scanners that are approximately 7 to 7.5" wide. You can mount any combination of the following Uniden Bearcat Scanners: 760, 780, 785, 796, BCT15, BCD996T, GRE PSR400 and PSR600, Whistler WS1065 and a variety of Radio Shack models including the Pro2053 and Pro2096 and similar models.

2 Base Radios	*Order #2354*	**$59.95**
3 Base Radios	*Order #2479*	**69.95**
4 Base Radios	*Order #5886*	**79.95**

✔ Please see **Scanner Antennas** on pages 47-48.

Using a scanner in a vehicle is restricted in some states.

WHISTLER WS1095

The **Whistler WS1095** scanner will offer amazing capability along with ease of use. The expected frequency coverage is: 25-54, 108-136.99, 137-174, 216-512, 764-781.99, 791-798.99, 806-960 (excluding cellular bands) and 1240-1300 MHz. This radio comes with a 2GB SD card preloaded with US and Canadian public service frequencies. You automatically program your scanner by merely entering your zip code or city. It handles analog and digital systems including APCO 25. One interesting feature of this radio is the remoteable head. And it magnetically fastens to the head bracket! This facilitates vehicle installation and use. Other features include: Simple menu driven user interface, Preloaded MicroSD card included, Easy updating via Internet, APCO P25 Digital, Multi-system analog trunking (Motorola, EDACS and LTR), CTCSS and DCS subaudible decoder, SAME Weather Alerts, Service search, User upgradable CPU firmware and Spectrum Sweeper. This new model is expected Dec. 2015.

Order #1095

This device has not been approved by the F.C.C.
This device may not be offered for sale or lease or be sold or leased until approval of the F.C.C. has been obtained.

WHISTLER WS1010

The **Whistler WS1010** is an affordable hand-held scanner with innovative features. Frequency coverage is: 29-54, 108-137, 137-144, 144-148, 148-150.8, 150.8-162, 162-174 and 380-512 MHz. 200 memories and five pre-programmed bands (Marine, Fire/Police, Air, Amateur and Weather). There is also a built-in priority channel. The weather alert capability features SAME receiving with 10 FIPS area memories plus there is a Skywarn function. There is a lock-out review key to confirm lock frequencies. There is a key lock for safety and the LCD is backlit. This radio is PC programmable and supports unit-to-unit cloning. There is a 9VDC external power jack and an earphone jack. The WS-1010 comes with a flexible BNC antenna, belt clip, AC adapter, manual, 4xAA alkaline battery holder *and* 4xAA rechargeable battery holder. 2.4 x 5.8 x 1.7 inches 8 oz.

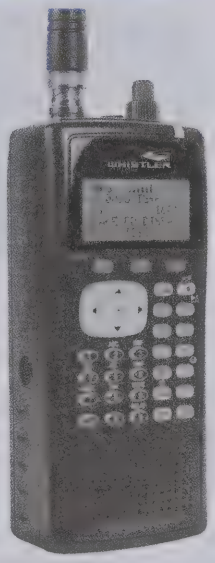
List $139.95 *Order #1010* **$94.95**

WHISTLER WS1025

The **Whistler WS1025** is an affordable scanner with innovative features. Frequency coverage is: 29-54, 108-137, 137-144, 144-148, 148-150.8, 150.8-162, 162-174 and 380-512 MHz. You can also receive the FM broadcast band (which has 20 separate memories). Other features include: 200 memories and five pre-programmed bands (Marine, Fire/Police, Air, Amateur and Weather) and priority channel. The weather capability features SAME technology (with 8 FIPS area memories). This radio scans at 40 channels per second and sweeps at 80 steps per second. There is also a keypad for direct frequency entry. The large backlit display shows channel and frequency. This radio supports programming by a PC and unit-to-unit cloning (software not supplied). There is a 3.5 mm earphone jack and BNC external antenna jack on the rear panel. The WS1025 comes with a screw-in telescopic antenna, AC adapter and manual. 8.25 x 2.375 x 6.875 inches 24.7 oz.

List $139.95 *Order #5020* **$99.95**

WHISTLER WS1040



The **Whistler WS1040** employs an intuitive Object Oriented User Interface is designed for ease of use, yet powerful enough to satisfy the most sophisticated users. Frequency coverage is extensive including: 25-54, 108-174, 216-512, 764-824, 849-869, 896-960 and 1240-1300 MHz. 1800 memories may be dynamically structured to bank sizes you prefer. A sophisticated Service Search is featured. This model also employs V-Scanner Technology that allows you to save a complete radio configuration within the radio, for recall into main memory as needed in the field. You can store configurations for different geographical areas or usage styles. Twenty one Virtual-Scanner Folders are provided, each capable of storing over 1,800 objects. The WS1040 scans common trunked radio system including Motorola Analog, EDACS, LTR and Digital APCO (9600 bps). Talkgroup and individual call monitoring is supported. When monitoring P25 digital systems, the exclusive Automatic Adaptive Digital Tracking instantly adapts the digital decoder to the digital modulation format of the transmitted signal, then analyzes the signal over 50 times each second to adapte to changes caused by multipath or fading. CTCSS and DCS subaudible squelch coding is processed by the same powerful DSP chip that is used for P25 digital decoding. It provides fast and reliable decoding of subaudible squelch signaling with squelch tail elimination. The large backlit LCD is four lines by 16 characters. The keypad is also backlit. There are weather alert function, SAME technology and Skywarn features. The multi-colored, super bright LED can be programmed. For example; blue for police, red for fire, green for ham radio, etc. The SKYWARN Storm Spotter feature provides instant, one button access to frequencies used by storm spotter networks. The spectrum sweeper function seeks out nearby RF sources. Operates from four AA cells or included 9VDC AC adapter. Supplied accessories include: BNC antenna, USB PC cable, 9VDC AC adapter, printed Owner's Manual, belt clip and two battery cases (one for alklalines and a yellow one for rechargeables).

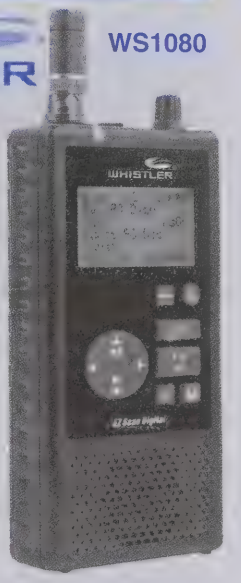
Order #1040 **$399.95**

CUSTOM SCANNER PROGRAMMING

Universal can custom program your scanner at time of purchase for your specific area. For cost and details call and ask for our Scanner Dept.

✔ Please see **Scanner Antennas** on pages 45-46.

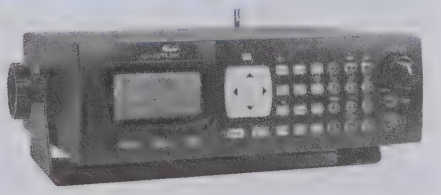
WHISTLER WS1080



The **Whistler WS1080** allows you to listen to desired communications without PC or Internet programming because everything is already in the scanner! The scanner includes a 2GB SD card inside the radio with the entire US database of trunked systems and popular conventional frequencies so you can monitor local police/fire and emergency frequencies right out of the box. APCO P25 Digital and multisystem analog trunking (Motorola, EDACS and LTR) systems are supported. Frequency coverage includes: 25-54, 108-136.99, 137-174, 216-512, 764-781.99, 791-798.99, 806-960 (excluding cellular bands), 1240-1300 MHz. Frequency steps: 3.125, 5, 6.25, 7.5, 8.33, 10, 12.5 and 25 kHz. Operates from four AA cells (not included) or USB 5 VDC. Includes printed manual, quick start guide and USB data cable that can also be used to charge rechargeable AA cells (not included). Requires Windows 2000, XP, Vista or Windows 7. 2.3 x 5.3 x 1.3 inches 7.4 oz.

List $599.95 *Order #6080* **$479.95**

WHISTLER WS1065



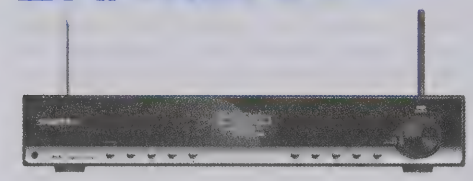
The **Whistler WS1065** employs cutting edge technology to bring a high level of performance and innovative features. This model clearly raises the bar in the area of advanced trunking scanners. Frequency coverage is extensive including: 25-54, 108-17, 137-174, 216-512, 764-776, 795-805, 849-869, 896-960 and 1240-1300 MHz. The vast memory system can store 40744 objects in 20 dynamically allocated scan lists. The large backlit LCD is four lines by 16 characters. The keys are also backlit. Supported trunking systems include Motorola Analog, EDACS, LTR and Digital APCO (9600 bps). There is a weather alert function, SAME technology and Skywarn features. The spectrum sweeper function seeks out nearby RF sources. You also get an exclusive multicolor ALERT-LED that provides a visual indication of activity on selected channels or talkgroups. The Global Menu feature allows you to tweak operational parameters. Includes telescopic BNC antenna, AC adapter, 12 volt wiring harness, DIN-E vehicle mounting shell, USB PC cable and CD.

List $599.95 *Order #1065* **$399.95**

WHAT IS INTERNET RADIO?

Thousands of AM, FM, shortwave and Internet stations simulcast, or stream their transmissions over the Internet. This is referred to as Internet radio, online radio, web radio, net radio, streaming radio or e-radio. These stations can be heard using a personal computer or an Internet radio. Either requires a **broadband** (high-speed) connection to the Internet. Internet radios require either a WiFi wireless or Ethernet wired router connection. Many Internet radio listeners enjoy using an Internet radio rather than a computer because it is easier, more intuitive, more convenient and far more energy efficient than using a PC.

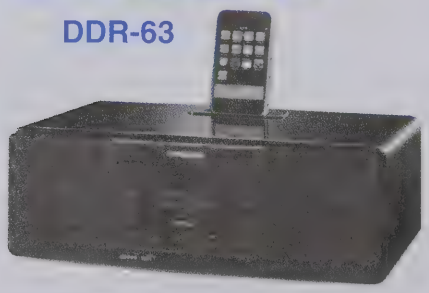
SANGEAN WFT-1



The **Sangean WFT-1** WiFi component tuner lets you add new excitement to your existing entertainment system. Select from over 16000 Internet Radio Stations, *plus* enjoy any of your local standard favorite FM stations. You can upload your favorites or any Internet station to your tuner's *My Station* folder allowing quick and easy access to play through your entertainment center. Twenty presets are provided. As with all Internet radios, you will you need a broadband Internet connection and router. 16.9 x 2.8 x 10 inches 5.6 lbs.

List $399.95 *Order #3527* **Please Call**

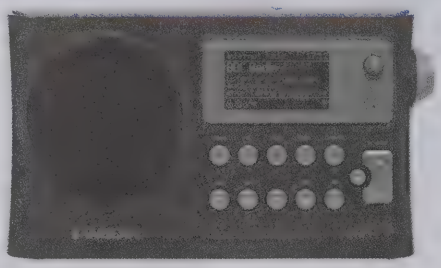
SANGEAN DDR-63



The **Sangean DDR-63** is all-in-one tabletop musical system presented in a beautiful wooden cabinet. It supports WiFi and FM-RDS plus it will also play from CDs, USB, SD, and iPod sources. The large back-lit LCD displays the current FM frequency and the touchpad buttons provide full access controls. The tuner also features a memory for ten presets on FM, 99 station presets on Internet Radio. Wake up to the radio, buzzer, line-in source, or iPod.

List $399.95 *Order #4062* **$339.95**

SANGEAN WFR-28



The **Sangean WFR-28** is a combination Internet radio and audio media streaming device that is fully portable. With it users can listen to over 13,000 radio stations from NPR, FOX news, CNN, BBC, CBS to KROQ, and over 35,000 podcast as well as to your regular FM Band with RDS (Radio Data System). Frontier Silicon's IR 2.2 network audio software provides the most complete, versatile and easy-to-use software available for the next generation Internet-connected audio systems. The WFR-28 delivers sound beyond its size. Bass and treble controls let you further adjust the sound to your liking. DLNA, UPnP & Windows 7 Certification is supported to enhance music sharing & playing. The WFR-28 even supports remote control by iPhone and iPod touch thanks to the *iSangean* App! This radio requires a broadband wireless Internet connection (except for the FM band). You can listen directly from your wireless router. No PC or Mac required.
9.4 x 6 x 2.5 inches 2 lbs.

List $199.95 *Order #4028* **$139.95**

SANGEAN WFR-20

The **Sangean WFR-20** WiFi Internet radio gives a listener access to nearly 10,000 stations in over 100 countries. This radio features 12 radio station presets and has four alarm timers, plus a sleep timer. You can control the Bass and Treble. It has an easy-to-read three line alphanumeric display. There is a stereo headphone jack plus line input and output jacks. A full function remote control is supplied. Please note that this radio requires a broadband wireless Internet or Ethernet (10/100 Mbps, RJ-45) connection. Supported formats include: MP3, WMA, AAC, AIFF, FLAC, Real Audio and AU. The WFR-20 has a wooden cabinet and sports two high quality 5 inch, full-range stereo speakers. With the Network Music Player function you can access your digital music library in any room in your house with no additional wires. 11.5 x 4.5 x 8.8" 7 lbs.

List $349.95 *Order #4020* **Please Call**

SANGEAN MMC-96i

The **Sangean MMC-96i** *iOctopus* is a multifunction remote interactive iPod docking pad with USB/SD WMA/MP3 playback. This expands the possibilities for enjoying your iPod's music. The *iOctopus* MMC-96i can also be used with all amplified speaker systems and other products with a 3.5mm stereo line output. You can play and control your iPod through the *iOctopus* full-function 8 button system and through the supplied infrared remote control. When your iPod is docked, you can listen to your iPod music while it is recharging. FAT 16 / FAT 32 file system. Maximum of 65536 files and a maximum of 999 folders. The left side of this device has a USB and SD card port. It supports SDHC cards to 16 GB. The rear panel has a 3.5mm stereo jack for line output and a 3.5mm stereo jack for headphone output. The iPod shown is not supplied. Please note that this device is not a radio receiver.

List $195.00 *Order #5404* **$84.98**

This specialized device is *not* a Wi-Fi receiver, but does not fit into any other catalog classification.

AOR AR-STV

The **AOR AR-STV** is a video receiver covering 900 to 2800 MHz. It features a 2.5 inch color LCD display. It has a recorder and sensor that captures video signals in real-time. Its built-in clock allows images to be time-stamped and an optional 4 GB SD memory card can be used to store up to nearly 2000 images. The AR-STV can detect NTSC, PAL, CCIR, EIA or scrambled reverse polarity video signals. It receives and displays video signals on L-band (1.2 GHz) or S-band (2.4 GHz). The USB connector makes it easy to download stored images into a PC. It operates from four AA size batteries or external DC power. With: SMA rubber duck antenna, four NiMH batteries and belt clip.

List $1019.00 *Order #5131* **$969.95**

This specialized device is *not* a Wi-Fi receiver, but does not fit into any other catalog classification. Please note it does *not* receive broadcast TV.

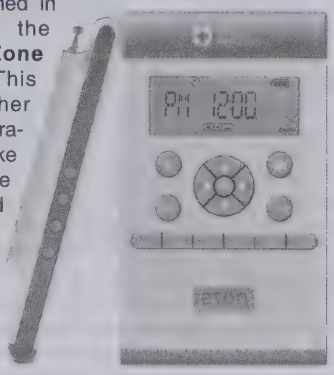
eton FRX3

Be prepared and stylish with the **Eton FRX3** emergency radio. This very cool portable receives AM, FM and all seven NOAA weather channels. The FRX3 is powered by a built-in solar panel or dynamo motor/hand turbine. Ninety seconds of hand cranking will provide about 5 to 7 minutes of radio, at low volume or about 20 minutes of flashlight time. The radio will fully charge with about 10 hours in direct sunlight. It features a built in Ni-MH battery (3.6V 600mAh.) and can also accept three regular AAA batteries (not included). The radio has a clock and can function as a normal clock radio. It even has a USB smart phone charger (dump charge) plus an LED light source. Size 6.9 x 5.8 x 2.6 inches, 1 lb. 5 oz.

FRX3 BLACK *Order #3030* **$59.95**
FRX3 RED *Order #5758* **$59.95**

✔ Please see additional Eton preparedness radios on page 47.

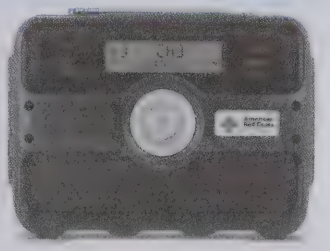
eton ZoneGuard



Stay informed in style with the **Eton Zone Guard**! This slim weather alert clock radio will make sure you're safe and sound and in the know. Beacons flash and warnings blare to keep you aware and informed. With S.A.M.E. technology (specific area message encoding), just enter your S.A.M.E. county code and if there's a warning, watch or advisory you will see it (with flashing red, orange or green lights) and hear about it, too. You can set up to 25 locations so you will be safe, wherever you are. The ZoneGuard also serves as a conventional AM-FM clock radio featuring six station presets. Includes AC adapter and requires 3 AA cells (not supplied). 4.1 x 7 x 1.1 inches.

ZoneGuard *Order #6047* **$39.95**

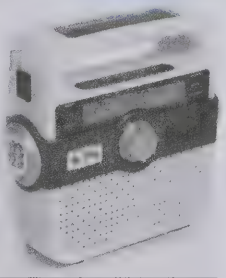
eton FR800



Be prepared and aware with the **Eton FR800** emergency radio. This affordable portable receives AM (520-1710 kHz), FM 87-108 MHz and all seven NOAA weather channels. SAME technology provides location based alerts. There is a headphone output jack and a line input jack. Operates from supplied AC adapter or three D cells (not included). 8 x 6 x 3.5 inches 15.1 oz.

FR800 RED *Order #4917* **$49.95**

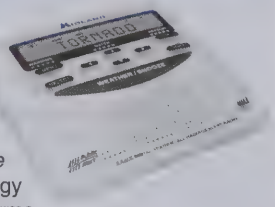
FR370



The **Eton FR370** ***Solar-link*** emergency AM, FM and weather radio operates from wind-up generator, built-in NiMH battery, solar cells or 3 AA cells (not included). It has a USB port to provide a dump charge to most cellular phones. 6.5 x 6.5 x 2.75"

Order #2251 **$69.95**

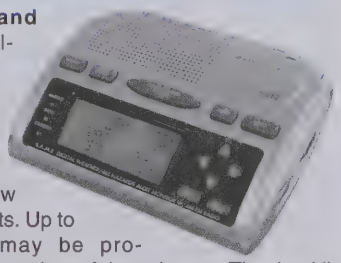
MIDLAND WR-120



The **Midland WR-120** all-hazard radio with alarm clock features the latest SAME *Specific Area Message Encoding* technology to reduce false alarms. You can program up to 25 counties and review your last 10 alerts. This model receives all seven NOAA weather channels and is *Public Alert Certified.* The LCD displays different watches or warnings plus AMBER alerts. LEDs indicate *Statement, Watch* or *Warning.* You can select 90 dB Siren, voice alert, or flashing red LED. The WR-120 has external jacks for antenna and optional accessories (strobe lights or pillow vibrators). Install three alkaline AA cells (not included) for power outages. Includes AC adapter. 5" x 2" x 5".

List $49.95 *Order #4089* **$39.95**

MIDLAND WR-300



The **Midland WR-300** all-hazard alert radio features the latest SAME technology including new AMBER alerts. Up to 30 areas may be programmed to reduce false alarms. The backlit three-line LCD displays 48 different watches or warnings. Three LED lights indicate: statement, watch or warning. The WR-300 has a telescopic antenna and external RCA phono antenna jack. There is also a 3.5mm accessory jack for keying optional external alert devices.. There is even an audio output jack for headphones or external amplifier. The built in digital AM/FM radio automatically switches to incoming alerts. The alert siren volume is adjustable. Install four AA cells (not included) to ensure use during power outages. Comes with 120 VAC power supply or it can operate from 10-12 VDC. 7.5 x 1.75 x 5.25".

List $89.95 *Order #1450* **$59.95**

eton FR360

Be prepared and ready to go with the **Eton FR360** emergency radio. This portable receives AM , FM MHz and all seven NOAA weather channels. It operates from a wind-up generator, solar cells, built-in NiMH cells or three AAA cells (not supplied). The generator charges the supplied, replaceable NiMH cells. Two turns per second for 90 seconds will provide 30 to 40 minutes of operation. There is a built-in LED cluster light with emergency flash. The battery compartment allows access to the built-in NiMH pack or for three optional AAA cells. The FR360 can also recharge certain cell phones (cord not supplied). 6.25 x 6.5 x 2.75 inches 1 lb.

FR360 RED *Order #5256* **$58.98**
FR360 WHT *Order #2458* **$58.98**
FR360 BLK *Order #4071* **$58.98**

SANGEAN CL-100

The **Sangean CL-100** S.A.M.E. tabletop all hazard alert radio is a Public Alert Certified weather radio and can receive all NOAA reports and also includes regular AM and FM reception with 5 memories per band. The FM band features RBDS technology to display: Program Service (PS) name, Radio text (RT) message, Clock Time (CT) and date. The built-in clock displays the time in 12 hour format plus has a calendar feature.

CL-100 *Order #5100* **$64.95**

Thinking preparedness? Please see the **Eton Boost Block** and **Eton Boost Turbine** devices on page 104.

The **Kaito KA600** ***Voyager Pro*** AM, FM, WX and shortwave emergency radio is shown on page 9.

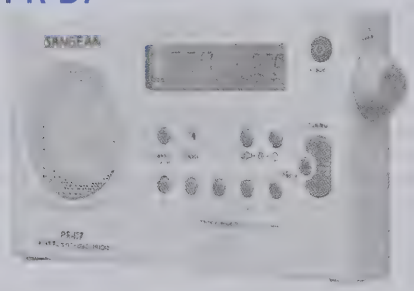
SANGEAN

PR-D5

The **Sangean PR-D5** is a top quality AM, FM, FM stereo radio with twin speakers. It has a 200 mm ferrite AM antenna for the best possible AM reception. The controls are very easy to use and you get 5 presets for AM and 5 for FM. It includes RDS technology to display station name, call sign, song title or other transmitted information, plus it can set the clock automatically. There is a stereo mono switch, AM 9/10 kHz step switch and backlit LCD. Rotary knobs are provided for tuning and volume. There is a built in clock timer with sleep function and humane wake up system to buzzer or radio. The left side of the radio has an auxiliary input and a stereo earphone jack. This radio includes an AC adapter and can also be operated from six C batteries (not included). 10.5 x 5.5 x 2.5 inches. One year limited manufacturer's warranty. This radio has an oversized AM antenna plus good selectivity and sensitivity. It is a strong choice for the MW DXer or anyone who listens to distant AM and FM stations. The Clear version does not have an auxiliary input or Alarm function.

PR-D5 White	*Order #0068*	**$79.95**
PR-D5 Black	*Order #5756*	**$79.95**
PR-D5 Clear	*Order #5107*	**$79.95**

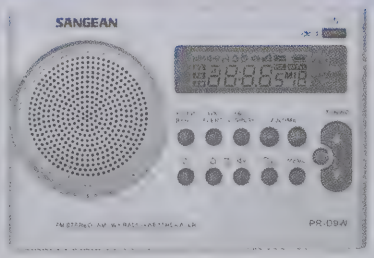
PR-D7



The **Sangean PR-D7** is a top quality AM, FM radio. The controls are very easy to use and you get 5 presets for AM and 5 for FM. There is a backlit LCD display. A rotary knob is provided for volume. Up-Down buttons are provided for manual tuning. There is a built in clock timer with sleep function and humane wake up system to buzzer or radio. The left side of the radio has an earphone jack. This radio includes a 12VDC AC adapter/charger and can also be operated from six AA cells (not supplied). The batteries load from the back panel. The AA cells may be of alkaline or rechargeable type. It is very important that the "battery type" switch in the battery compartment be correctly set to alkaline or rechargeable. 8 x 4.5 x 1.9 inches.

PR-D7 White	*Order #0211*	**$59.95**
PR-D7 Black	*Order #0432*	**$59.95**

PR-D9W



The **Sangean PR-D9W** AM/FM Weather Alert portable radio is a perfect companion at a picnic, a ball game, a camping trip, and even to keep you informed at home through severe weather conditions and other emergencies or power outages. The 2.5 inch, 8 ohm speaker provides a full sound. The PR-D9W is a versatile, well-designed portable AM/FM radio coupled with a weather radio for updates and emergencies. It features a built in dual alarm clock that can wake you up in the morning, 19 total memory presets, auto scan tuning, lock switch, super capacitor back up power for clock and memory presets, sleep and snooze function and easy to read large LCD display with adjustable illumination. The clock may be set to either 12 or 24 hour format. There is a battery charging LED and battery power indicator. The back panel has a battery type selection switch for either Alkaline or NiMH/NiCad batteries. This radio requires four AA cells (not included). Includes AC adapter/charger.

PR-D9W	*Order #0097*	**$69.95**

PR-D14

The **Sangean PR-D14** is a true ultra-compact portable AM/FM-RDS (Radio Data System) Digital Radio with USB port for playing MP3/WMA files from a USB drive. All controls are conveniently located and you can see the frequency and the clock on the display. It also features a tone control (talk and music) for more powerful overall sound. The PR-D14 has excellent sensitivity and selectivity and will surprise you at its ability to pull in those distant stations. Five presets are available on each band and the auto seek will automatically seek the active stations across the entire band rather than to the next frequency. The radio can be set to automatically turn off after 120, 90, 60, 45, 30 or 15 minutes, so you can fall asleep to the sound of music, talk or news. The humane wake-up alarm allows you to rise to music, buzzer or media (USB). You can power the PR-D14 with the included AC adapter or four "D" cells (not included). The 3 inch, full range speaker provides great sound. There are jacks for: Aux-in, headphones and DC input. 9.4 x 5.9 x 2.5".

PR-D14	*Order #3014*	**$69.95**

PR-D15

The **Sangean PR-D15** a top quality AM, FM, FM stereo radio with twin speakers. It has a 200mm ferrite AM antenna for the best possible AM reception. The controls are very easy to use and you get 5 presets for AM and 5 for FM. It includes RDS technology to display station name, call sign, song title or other transmitted information, plus it can set the clock automatically. There is a stereo mono switch and backlit LCD. Rotary knobs are provided for tuning and volume. There is a built in clock timer with sleep function and humane wake up system to buzzer or radio. The radio has an auxiliary input and a stereo earphone jack. Includes a 9VDC 700 mA AC adapter and can also be operated from six alkaline or MiMH C batteries (not supplied). Output power is 800mw x 800mw. 10.5 x 5.5 x 2.5 inches.

PR-D15	*Order #2015*	**$89.95**

RCR-5 WHT

The **Sangean RCR-5 WHT** AM-FM clock radio has digital tuning, Humane Wake System, ten memories, Dual Alarm Timers, Sleep and Nap timers. The nap alarm signal sounds after the period of time which you have set (from 10-120 minutes). You may play external audio devices via the AUX IN jack and there is a headphone jack. The back light level may be adjusted. With AC adapter. 6.75 x 2.25 x 5.5" 1 lb. 2 oz. White case.

List $69.95 *Order #0957* **$44.95**

The **RCR-5 BLK** is as above, but black case.

List $69.95 *Order #6152* **$44.95**

RCR-22

The **Sangean RCR-22** is an advanced AM/FM clock radio. The time is precisely synchronized by the atomic time station in Boulder, Colorado and is displayed via the large LCD. The LCD can also display the day of the week and month, day. Advanced features include: 15-120 min. sleep timer, snooze, a dual time 'HWS' Humane Waking System to gently ease you out of your slumber. 7 AM and 7 FM presets are available. With mini stereo headphone and auxiliary input jacks.

List $79.99 *Order #1284* **$59.95**

SANGEAN

DT-400W

If you enjoy listening to AM, FM and weather while on the go, you will love the **Sangean DT-400W**. About the size of a pack of cigarettes, it will fit in your shirt pocket and receives AM, FM and FM stereo, plus NOAA weather audio. Other features include: 19 memories, 90 min. auto-shutoff, lock switch, backlit display, clock, deep bass boost, belt clip, built-in speaker, stereo-mono switch, earphone jack (3.5mm) and lightweight stereo earplugs. Requires two AA cells (not included). Coverage: 520-1710 kHz, 87.5-108 MHz and NOAA channels. Yellow.

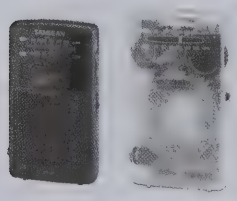
List $89.95 *Order #4400* **$59.95**

RCR-3

The **Sangean RCR-3** has a modern design and modern features! The automatic tuning system scans and programs local radio stations to memory. The synchronized atomic analog clock allows for quick reading and you can set two different alarm times throughout the week. Advanced features include: 15-120 minute sleep timer, snooze, dimmer, a dual time HWS *Humane Waking System* to gently ease you out of your slumber. There is also a Tone control and a headphone jack. The 3 by 4 inch speaker delivers pleasant sound from the 800 mW amplifier. Tunes 520-1710 kHz AM and 87.5-108 MHz FM with 7 memories per band. Requires 117 VAC 60 Hz. 5.25 x 7.5 x 3".

List $139.50 *Order #3089* **$79.98**

SR-35
SR-35CL



The **Sangean SR-35** fit-in-your-pocket AM / FM radio for on-the-go listening. There is an analog dial and Tune LED. The built in speaker is 2.25 inches in diameter. With earphone jack. Operates from two AA batteries (not included). 3.1 x 4.5 x 1.3 inches 5.2 ounces. Black case.

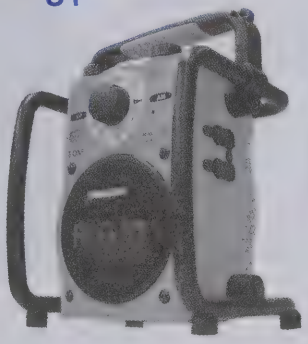
SR-35 *Order #2035* **$19.95**

The **Sangean SR-35CL** *clear* version does not have a speaker, but does include ear buds. This version complies with certain prison regulations.

SR-35CL *Order #5646* **$21.95**

SANGEAN

U1



The **Sangean U1** is a rugged AM, FM utility radio that is made to stand up to the weather. It is water resistant to JIS4 standards and has been ruggedized for the construction or camp site. It has a smooth rotary 5:1 vernier tuning knob and LED tune indicator. The 6.5 inch full range speaker and Deep Bass Boost combine for impressive sound. The U1 has an AC wire compartment with 6 foot AC cord. It can also be operated from six D cells (not supplied) or external 9 to 14 VDC. There is an 3.5mm AUX input for an external audio source. There is also a ¼ inch mic input jack so it is public address capable with optional mic. 10.25 x 14.5 x 10 inches 9 lbs.

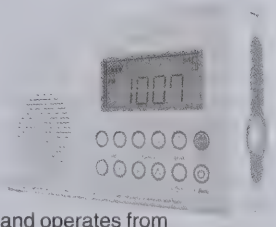
List $139.50 *Order #0579* **$99.95**

U3

The **Sangean U3** AM, FM utility radio is made to stand up to the weather. It is water resistant and has been ruggedized for the construction or camp site. It has a smooth rotary tuning knob and backlit digital dial. There are five presets for AM and five for FM. The 6.5 inch, 7 watt full range speaker and Deep Bass Boost combine for an awesome sound. There is even a built-in digital clock alarm (buzzer or radio) with sleep and snooze functions. The U3 has an AC wire compartment with a heavy six foot AC cord. This rugged radio is great for camping, the garage or at the work site. It can also be played from six D cells (not included) and may be operated from external 9 to 14 VDC. There is an AUX input for an external audio source. 10.25 x 14.5 x 10 inches 9 lbs.

List $169.50 *Order #2029* **$119.95**

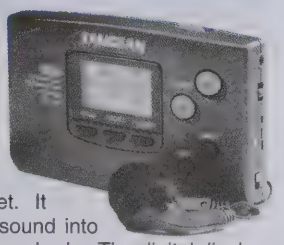
H2O1



The **Sangean H2O1** is a quality AM/FM water resistant radio with a backlit LCD and 10 presets. It has a built in clock with sleep function and operates from two D cells (not included). With wall mounting bracket and carry strap. 9.4 x 5.5 x 2.3 inches.

List $149.95 *Order #0862* **$64.98**

DT-110

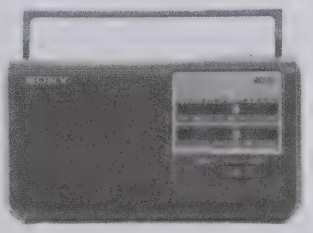


The **Sangean DT-110** provides concert hall quality in a compact AM/FM stereo receiver that slips conveniently into your shirt pocket. It plays unbelievable sound into the provided stereo ear buds. The digital display shows frequency and memory number. Other features include: stereo-mono switch, Deep Bass Boost, 90 minute auto-shut off, 15 memories, scanning and 9/10 kHz AM tuning steps. 3.54 x 2.24 x 0.78 in. 3.2 oz. Requires two AAA cells (not included).

Gold Case *Order #4502* **$39.95**
Clear Case *Order #2594* **$39.95**

SONY

ICF-38



The **Sony ICF-38** is a portable AM-FM receiver with analog dial. This affordable radio features an LED tuning indicator for precise station tuning even in dim light, a tone switch and a carrying handle. The 400mW amplifier and 3 5/8" speaker produce a wide range of sound from high to low frequencies. A mono earphone jack is provided for personal listening (earphone not imcluded). The ICF-38 has a built-in AC cord, or can operate from four AA cells (not included). 9.3 x 5.3 x 2.8 inches 1.9 lbs.

List $29.95 *Order #0038* **$24.95**

LB-100

The **Sangean LB-100** AM-FM *Lunch Box* radio is strong on both durability and great sound! It is a great work site radio. The durable ABS plastic case is rain, dust and shock resistant. The digital PLL tuner with backlit display features 5 AM and 5 FM memories. The 5 inch water resistant speaker provides a big sound. Needs 4 C cells (not included) or 110 VAC. 12 x 9.5 x 7.75 inches.

List $139.95 *Order #0148* **$69.95**

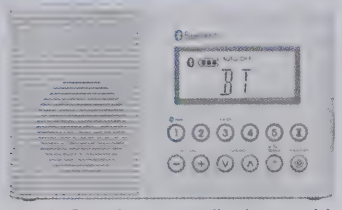
SR-3

Sangean ingenuity brings you the **SR-3** superbly styled, fit-in-your-pocket AM/FM Stereo Radio. The Deep Bass Boost feature yields extraordinary sound quality. Newly styled stereo ear buds and neck strap are included plus a trailing antenna. Has Stereo-Mono switch. Requires one AAA cell (not included). 1.5 x 3 x 0.6"

SR-3 *Order #1103* **$29.95**

SANGEAN

H2O2



The **Sangean H2O2** shower radio has a big sound. Unlike other shower radios, most of which are only water resistant, the Sangean H202 can be fully submerged without damage. The H202 has five digital presets for each band (AM/FM). You can easily tune into your favorite stations without relying on conventional dialing and now, you can even connect or stream audio from your computer, MP3 player, smart phone or any other Bluetooth enabled devices. Other great features include set time (1-120 min.), and improved built-in LED flashlight, battery level indicator, large LCD read out clock, emergency buzzer and more! The H202 runs on two D-cell batteries (not included).
List $189.00 *Order #6030* **$89.95**

SANGEAN DT-120

The **Sangean DT-120** AM/FM stereo receiver will fit your shirt pocket yet plays unbelievable sound into the provided stereo ear buds (no speaker). This radio has 10 memories for FM and 5 for AM. The DBB Deep Bass Boost provides an amazing rich, deep sound for such a small radio. Other features include: stereo-mono switch, 90 minute auto-shut off, battery low indicator, scanning and 9/10 kHz AM tuning steps. Only 2 x 3.7 x 0.7 inches and 2 oz. Requires one AAA cell (not included), except for DT-120II which requires two AAA cells. Includes stereo ear buds. Available in clear (shown) or white.

DT-120 CLEAR *Order #1048* **$39.95**
DT-120II WHITE *Order #0134* **$44.95**

SANGEAN

RCR-10

The **Sangean RCR-10** atomic clock radio features a large LCD display with adjustable illumination that makes it easy to see and read in the morning. The iPod docking station easily connects your iPod to the clock radio and charges it. Enjoy the quality of the high performance sound system that plays your music with clear, crisp sound. Set the alarm to wake you up to the buzzer, your favorite radio station or your iPod. The nap function can be set as a quick alarm for a short interval of sleep without disturbing the alarm settings. Two AA batteries keeps the radio working during power outages and retains your presets. There are five presets for AM and five for FM. The 7 day dual alarm wakes you to iPod, radio or buzzer. With remote control. 10.5 x 4 x 7.2 inches.
RCR-10 BLK *Order #1245* **$79.95**

RCR-9

Are you looking for a quality clock radio with a small footprint? The **Sangean RCR-9** is it. It features: AM FM-RBDS stereo digital tuning, 18 presets, LCD digital display, radio controlled analog clock snooze and nap timers and a 2.5 inch speaker. There are jacks for earphone, aux. input and terminals for FM wire antenna. 5.6 x 5.6 x 3.5 inches.
RCR-9 BLK *Order #4113* **$79.95**

SANGEAN

WR-2

The **Sangean WR-2** puts high technology and incredible sound on your night stand or desk. The enclosure is acoustically balanced and the enhanced frequency response, front firing speaker and 7 watt amplifier provide rich room filling sound. Advanced features include: backlit four level LCD, lock with alarm (radio or buzzer), bass compensation, full range bass and treble control, auxiliary input jack, stereo headphone jack, 10 memory presets and RDS. Preset and clock values are saved 30 minutes during power outages. Antenna input for AM and FM plus headphone jack. With digital tuning, auxiliary input jack and full featured infrared remote. It features a removable AC cord and includes an FM wire antenna. FM antenna input via switchable 75 ohm F-type jack or Hi-Z terminals. 9.5 x 4.5 x 6 inches 5 lbs. 117 VAC 60 Hz.

WR-2WL Walnut *Order #3281* **$129.95**
WR-2BK Black *Order #3282* **$129.95**
WR-2WH White *Order #3283* **$129.95**

The special **WR-2 Clear** version, in order to comply with correctional facility regulations, does *not* have a remote, auxiliary input or alarm function.
WR-2CL Clear *Order #2841* **$129.95**

WR-22

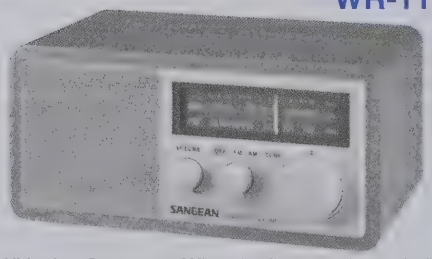
The **Sangean WR-22** is similar to the WR-2, but adds a USB port and Bluetooth® wireless feature.
WR-22WL Walnut *Order #4022* **$159.95**
WR-22BK Black *Order #5971* **$157.95**

WR-12

The **Sangean WR-12** is an AM, FM table radio with a traditional analog dial, but employs the latest advances in electronics to provide a superb, full sound. The *2.1* channel system uses dual stereo speakers and sub woofer. Bass and treble can be set independently and the dial back lighting is adjustable. It features an acoustically tuned, light walnut cabinet. External AM/FM antenna jacks.
WR-12 *Order #4012* **$149.95**

The **WR-12BT** has Bluetooth® and darker cabinet.
WR-12BT *Order #5972* **$169.95**

WR-11



With the **Sangean WR-11**, distant AM and FM stations are brought to your door step through advanced RF/IF electronic circuitry. The enclosure is acoustically balanced and the enhanced frequency response, front firing speaker provides rich room filling sound. The acoustic bass compensation and 7 watt amplifier give this small radio a big sound. Antenna input for AM and FM plus headphone jack. With vernier tuning, band indicator and auxiliary input jack. 9.5 x 4.5 x 6" 117 VAC.
WR-11 *Order #3854* **$99.95**

EAR-10

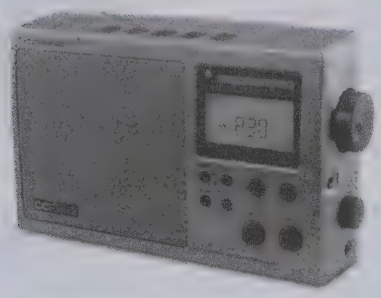
The **Alert Works EAR-10** alerts you to pending danger from weather and civil emergencies. It receives all seven NOAA channels and features S.A.M.E. localized reception. It has time and alarm clock functions, an adjustable backlit display, and three LED alert levels: *Watch-Warning-Advisory*. The emergency battery backup features requires 4 AA cells (not supplied). Rear panel jacks for external antenna and external alert. With 6VDC AC wall adapter. 7.75 x 4.25 x 4 inches.
List $39.95 *Order #5024* **$34.95**

C.CRANE CCRADIO-EP

The **C Crane CCRadio-EP** gives you high performance AM and FM reception coupled with simple operation. There is no clock to set, no station presets to program. All you have to do is push the red power button and turn the dial. There is a separate button for the dial light. The fidelity is enhanced with separate bass and treble control knobs. For very weak stations, AM reception can be fine tuned with a manual adjustment of the built-in "Twin-Coil Ferrite® Antenna." No adjustment is needed to bring in most stations clearly. This single conversion design is ideal for the AM band listener looking for long range reception. There is an earphone jack for private listening and a line input jack for MP3 players or other external audio sources. This radio comes with an AC adapter (6 volt) or may be operated from four D cells (not supplied). 11.4 x 7.3 x 2.75 inches 4.5 lbs.

CCRadio-EP *Order #3267* **$64.95**

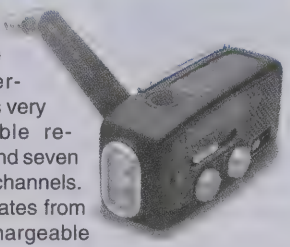
C.CRANE CC RADIO 2E



The **C. Crane CC Radio 2E** is a quality radio specifically designed for talk radio, news, sports and weather. Separate Bass and Treble controls, combined with the 5 inch speaker, provide a full sound. This digital radio tunes AM, FM, the 2 meter ham radio band and NOAA weather. A special Weather Alert feature notifies you of weather emergencies. Fine tuning on the AM band is to 1 kHz. Five stations can be stored into memory on each band. A clock alarm is also featured. This latest version 2 features a programmable timer (compatible with the CCrane Versa-Corder), audio in-out jacks, signal strength meter, battery strength meter, plus FM stereo through the headphone jack. This radio operates with the supplied AC cord or may be operated from four D cells (not supplied). Available in a mica black case or titanium silver colored case. 11 x 6.5 x 4 inches.

CC2BE Black *Order #3682* **$149.95**
CC2TE Titanium *Order #6155* **$149.95**

eton FR160



Be prepared and aware with the **Etón FR160 Microlink** emergency radio. This very compact portable receives AM, FM and seven NOAA weather channels. The FR160 operates from a supplied rechargeable NiMH battery pack which may be recharged from the wind-up generator or solar-cell panel on top of the radio. Ninety seconds of winding will allow about 30 minutes of low volume listening. It can also be recharged via a USB cable (not provided). Plus there is a built in three LED flashlight! You can even recharge your cell phone with the FR160 via the USB jack. 5 x 2.4 x 1.8 inches 8.5 ounces.

FR160 BLK *Order #0160* **$29.98**
FR160 BLU *Order #3812* **$31.98**
FR160 RED *Order #4166* **$31.98**

eton FR170

The **Etón FR170** is similar to the FR-160 but with a circular rather than linear radio dial. Red/White.

FR170 *Order #4170* **$34.95**

eton FRX2

The **Eton FRX2** is a compact, self powered emergency radio and light source. This very cool and very compact portable receives AM (520-1710 kHz), FM 87.5-108 MHz and all seven NOAA weather channels. It has a built-in Ni-MH battery, wind-up dynamo plus solar cells. It features a USB smart phone charger (dump charge). Available in black or red. 5.4 x 2.4 x 2.4".

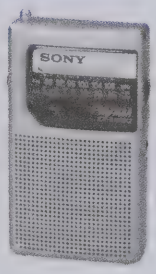
FRX2 BLACK *Order #5865* **$36.95**
FRX2 RED *Order #6026* **$36.95**

TECSUN CR-1100

The **Tecsun CR1100** radio brings DSP technology to AM and FM listening. The 3 inch speaker delivers superior sound and impressive clarity. You can tune this radio four ways: manual, autoscan, direct memory-access and ATS autoscan memories (300 memories). The multifunctional backlit display shows frequency, noise level, electric field intensity, S/N ratio, temperature, 12/24 hour clock and battery strength. The alarm, with snooze, wakes you to a chime or radio. There are jacks for earphone, aux. input and FM antenna. Operation is from four D cells or external 6 VDC adapter (neither included). 10.25 x 6 x 2.5 inches.

List $99.95 *Order #5864* **$69.95**

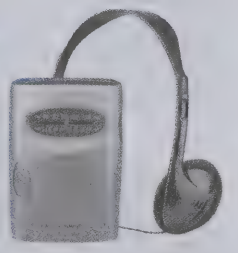
SONY ICF-S10MK2



The **Sony ICF-S10MK2** is the classic pocket sized AM-FM radio. It features a 2¼" speaker and plays up to 40 hours on two AA cells (not supplied). It has a mono earphone jack and tune LED. Only 2.8 x 7.75 x 1.3" 7 oz. Silver.

Order #1210 **$13.95**

SONY SRF-59



The **Sony SRF-59** is a pocket sized AM, FM stereo radio. It comes with a stereo headset and operates from one AA cell (not supplied). 2.7 x 3.75 x 0.8".

SRF-59 *Order #0732* **$14.95**

C.CRANE CCPKT

The **C Crane CCPKT** portable AM, FM, weather radio is easy to use and has great performance for a small radio. It has five memory buttons per band and it stands upright for best audio through the speaker. With two AAA cells (not included), you get up to 75 hours of play with the supplied earbuds or 25 hours through the speaker. Features include: backlit display, clock with alarm and sleep timer, removable belt clip, battery meter, signal meter plus stereo or mono FM reception. The weather alert automatically disables the AM/FM radio when activated. 2.5 x 4.25 x 1" 4 oz.

CCPKT *Order #5949* **$59.95**

PYRAMID HP-30

The **Pyramid HP-30** stereo headphones feature padded headband and earpads plus individual volume controls for each ear. Also has a stereo - mono switch and coiled 6 foot cord. With mini stereo plug and an adapter to convert it to ¼" stereo plug. 32 ohms.

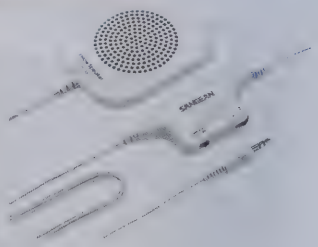
HP30 *Order #2280* **$14.95**

YAESU YH-77STA

The **Yaesu YH-77STA**s are light weight stereo communications headphones designed primarily for use with Yaesu's top-end transceivers, but will also work with most newer communications receivers that support a stereo jack. Adjustable. With ¼" stereo plug.

YH-77STA *Order #2342* **$89.95**

SANGEAN PS-300



The **Sangean PS-300** speaker sits comfortably under your pillow. It plugs into most audio devices including radio, iPhone, iPad, MP3 player, Smartphone or TV. Enjoy your listening without disturbing your partner. Unlike other pillow speakers, this model has a built-in volume control *and* an audio amplifier to enhance the output level. There is a switch to turn off the amplification and drive the speaker directly to save battery life. Requires one AAA battery (not supplied). The 6.5 foot cord terminates to a stereo 3.5mm mini plug.

PS-300 *Order #6029* **$18.95**

KENWOOD HS-5

The **Kenwood HS-5** deluxe communications headphones offer comfort and performance at a modest price. Black metal and plastic. 8 Ohms. ¼" mono plug.

HS-5 *Order #0357* **$74.95**

Philmore HD3030

The **Philmore HD-3030** are luxury hi-fi headphones for the discriminating listener. There are volume controls on each ear piece as well as a Mono-Stereo switch. Response is 20 Hz to 20 kHz, 8 ohms. Supplied with 1/8" mini stereo to 1/4" stereo adapter plug.

HD3030 *Order #2323* **$16.95**

SANGEAN PS-100

The **Sangean PS-100** Pillow Mate speaker sits comfortably under your pillow. You can listen to your radio without disturbing your partner. White with cord that terminates to a stereo mini-plug. 3.5 x 4 x 1 inches.

PS-100 *Order #0885* **$12.95**

KENWOOD HS-6

The **Kenwood HS-6** communications headphones are designed for the listener who prefers a very lightweight headphone. Includes pair of spare ear pads. 100-10000 Hz response. 4 ounces. 12.5 Ohm. ¼" mono plug.

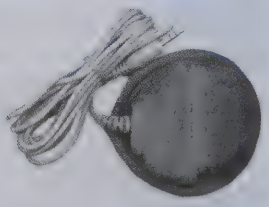
HS-6 *Order #0358* **$59.95**

CyberAcoustic TP-60

The **Cyber Acoustics TP-60** mono headphones feature a padded headband *and* padded earpieces plus individual volume controls for each ear. The coiled cord terminates in a right angle mono 3.5 mm mini headphone plug. Here is a great way to hear your scanner or radio at a noisy sports event such as a car race. Blue color. 12 oz.

TP-60 *Order #0146* **$24.95**

C.CRANE PS-200



The **CCrane PS-200** SoftSpeaker makes private listening in bed comfortable. Just slip it under the pillow, or the padding is so soft you can even set it directly under the ear. The foam padded cover is removable for cleaning. It has a 6 foot cord terminating in a 3.5mm mini stereo plug.

PS-200 *Order #4530* **$19.95**

HEIL SOUND ProSet 3

The **Heil ProSet 3** headphones have an extended frequency response of 10 Hz to 22 kHz for exceptional clear and balanced sound reproduction. And it provides outside noise reduction. The ergonomic design has a soft, adjustable cushioned headband and you get padded, replaceable ear cushions. The convenient folding construction allows for compact transport and storage. It has three twist lock detachable cables terminating to 1/8" (3.5 mm) plug. Plus a gold-plated stereo, screw-on 1/4" adapter is included. Almost every Universal employee uses these headphones.

PS3 *Order #5893* **$99.95**

ICOM SP-27

The **Icom SP-27** clear acoustic tube earphone is designed to be hidden behind the ear making it hard to see. This makes it an ideal earphone for security, hotels, restaurants, retail and airports. Supplied with a clothing clip and spare ear bud. It has a 38 inch cord with 3.5mm mono threaded connector.

SP-27 *Order #3209* **$26.95**

■ Unlike hi-fidelity headphones which are designed for maximum frequency response, communications headphones have a shaped response to enhance voice-CW frequencies only.

C.CRANE SSV

The CCrane SoftSpeaker™-2 features an in-line volume control to adjust the volume level of the pillow speaker without having to change the volume on your radio or audio device. The SoftSpeaker was designed to be used close to your ear so only you can hear it. The speaker has a soft cover so you may easily rest your ear right on it. It offers the perfect combination of comfort, privacy and quality. Its durable, high-flex cord and removable, washable cover ensures longevity. Response is 20~20000 Hz, 32 ohms. 2 inch diameter with a 6.5 foot cord terminating to a 1/8" (3.5mm) stereo plug.

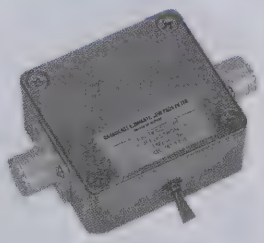
SSV *Order #5951* **$22.95**

PAR VHF-FM

The **Par VHF-FM** is designed to help scanner listeners cope with interference from FM radio stations (88-108 MHz). The Par VHF-FM is a 3 pole notch filter designed to eliminate FM broadcast interference especially on the VHF air and VHF low bands. There is an adjustment at the base of the filter that determines the frequency of the center notch. It is factory preset to 98 MHz and normally does not require user adjustment. The housing has a female BNC for input and a male BNC for output for easy connection to most scanners. The bandpass is 0 to 1000 MHz with a notch band from 88 to 108 MHz. Minimum stopband and attenuation is 24 dB and maximum stopband attenuation is 45 dB.

VHF-FM *Order #0098* **$67.95**

BCST-HPF & BCST-LPF



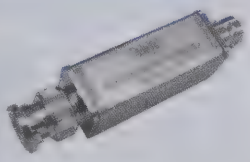
The **Par BCST-HPF** is designed to help shortwave listeners cope with interference from AM stations. This 7 pole elliptic high pass filter passes 1.8 to 200 MHz and notches out 0-1.7 MHz. The housing has SO-239 jacks for input and output and also has a toggle type bypass switch.

BCST-HPF *Order #4426* **$67.95**

The **Par BCST-LPF** is designed to help long wave DXers cope with interference from nearby AM stations above 540 kHz. Stop band is 540 kHz to 300 MHz. The housing has SO-239 jacks for input and output and has a bypass switch.

BCST-LPF *Order #1143* **$67.95**

AOR ABF128



The **AOR ABF128** is a receive bandpass filter, designed for serious VHF airband listeners. The addition of this filter to the antenna's signal path provides additional selectivity which enables the receiver's circuitry to better cope with strong interfering signals that can leak into the 108-136 MHz VHF air band. The ABF128 is not a preamp, but provides additional selectivity to any receiver's front end by reducing unwanted strong signals from reaching the receiver's first mixer stage and thus significantly improves reception in many situations. Out-of-band attenuation is typically 25 dB from 0.3 to 75 MHz and 20 dB from 190 to 400 MHz. A BNC female is fitted to the top of the ABF128 and a BNC male plug to the other end. You must remove the ABF128 when monitoring signals other than VHF airband.

ABF128 *Order #0915* **$76.95**

PAR VHFDN152

The good news is that most new amateur 2 Meter transceivers have wideband receive. The bad news is that they are very susceptible to intermod from 152-154 MHz pagers. The **Par VHFDN152** notches out these frequencies while introducing only 0.3 dB insertion loss in the 2M band. May be left in-line for 2M/440 rigs too. SO-239 in/out.

VHFDN152 *Order #1898* **$66.95**

VHFDN152HT

The **Par VHFDN152HT** version is the same as above, but for handi-talkies and uses a male and female BNC.

VHFDN152HT *Order #3491* **$64.95**

UHFBP

The **Par UHFBP** is a special bandpass filter designed for the military band listener. It passes 225 to 400 MHz, and blocks other frequencies. BNC female input and BNC female output.

UHFBP *Order #5029* **$78.95**

VHFBP

The **Par VHFBP** is a special bandpass filter designed for the air band listener. It passes 116 to 134 MHz, and blocks other frequencies. Unlike other aerocom bandpass filters, the VHFBP not only provides protection from VHF pagers, NOAA, 2 meter amateur signals etc, but also offers excellent attenuation of the FM broadcast band - the primary offender of aerocom signals. BNC female input and BNC male output.

VHFBP *Order #2978* **$78.95**

VHFSYM152HT

The **Par VHFSYM152HT** is a scanner intermod filter that has a notch band of 152 to 153 MHz and a useful passband of 0 to 1 GHz. The notch band covers the offensive pagers in this range. The notch depth is up to 38 dB. Typically, Par symmetrical filters have a 3dB bandwidth of ±1.5% or roughly 2.25 MHz for VHF HI filters. Designed for scanner use. BNC female input and BNC male output. 4 x 2 x 0.75 inches.

VHFSYM152HT *Order #1813* **$69.95**

Bonito AAS300

The **Bonito AAS300** RadioJet 3-way active RF splitter is a great addition to your monitoring post. It allows you to simultaneously share one antenna with up to three receivers. Isolation is 70 dB. Insertion loss is only 1.5 dB. The rear panel features one BNC antenna input and three BNC jacks for output to your receivers. This device is powered from a USB power source (5 VDC at 50 mA). The USB power supply is not included, but a well shielded USB cable is included.

AAS300 *Order #6134* **$339.95**

RF systems DPX-30

The **RF Systems DPX-30** is designed to work with today's wide band scanners covering the range of 100 kHz to 2000 MHz. Most such wideband receivers have only one antenna input jack (usually a BNC). Yet finding a single antenna to cover this immense range is almost impossible. The DPX-30 makes it possible to combine the signals of a separate shortwave and separate VHF/UHF antenna to the single antenna input of the receiver. It accomplishes this without mutual interference and prevents overload of the wideband radio. The input jack for 0 to 30 MHz is an SO-239 (accepts a PL-259). The input for 30 to 2000 MHz is a BNC. The single output jumper is BNC male 0-2000 MHz. This device is ultra low-loss (typically less than 0.3 dB). Greater than 50 dB isolation between antennas is achieved. Made in Holland.

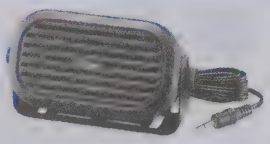
DPX-30 *Order #3578* **$169.98**

ApexRadio SPL-2

The **SPL-2** allows two shortwave receivers to be connected to one antenna without interaction and with minimal signal loss. A very high degree of isolation (over 30 dB) between both receivers ensures that each receiver can be tuned and operated as if it were connected to its own antenna. The SPL-2 can also be used in reverse. That is, as an antenna combiner for two antennas to one receiver. This device is operational from 1 MHz to 650 MHz. This is a passive (not amplified) device. The SPL-2 uses three SO-239 jacks.

SPL-2 *Order #5043* **$119.95**

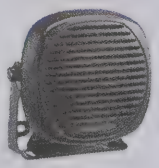
ICOM SP-35



The **Icom SP-35** mobile speaker comes on a hinged mount. This allows the speaker to be supported from the top, bottom or back. The SP-35 has a 5 watts capacity with 7 watts peak. An audio cable wired to the rear panel terminates to a mono mini plug.

List $77.00 *Order #5874* **$59.95**

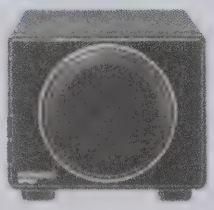
KENWOOD KES-5



The rugged **Kenwood KES-5** mobile speaker meets MILSTD 810C/D/E/F specifications! This 4 ohm speaker has a maximum input power of 40 watts. The metal bracket may support the speaker from below or above. User must supply and install the appropriate radio plug. 5.125 x 5.125 x 3 inches.

List $60.00 *Order #1089* **$44.95**

KENWOOD SP-23



The **Kenwood SP-23** 8 ohm speaker features a metal cabinet with flip-out tilt bar. It has a 3 inch speaker element rated to 1 watt with a 300 to 5000 Hz response. The rear panel features two screw connections. This speaker includes a 3 foot audio cable. 4.8 x 3.75 x 9.25 inches 2.8 lbs.

List $99.00 *Order #0692* **$89.95**

West Mountain Radio CLR/SPKR

The **West Mountain Radio CLR/SPKR** is a small loudspeaker containing a unique ClearSpeech® adaptive noise reduction circuit and audio amplifier. It is ideal for mobile radio operation. Noise reduction is superb. The DSP passes the voice and CW sounds, while attenuating noise, such as hum, hiss, whistles, static. It effectively removes heterodynes, ignition noise, lightning crashes, power line noise and hum. The process is dynamic and changes with the interference and the signal, but the effect is rewarding. The DSP recognizes the intermittent nature of CW and allows it to pass noise free. Its audio cable plugs into the speaker output of your radio. Connect the PowerPoles to any convenient 12 volt supply. There is a 1/8 inch phone jack on the back for connection to an external 8 or 4 ohm loudspeaker. Frequency response is 300 to 3400 Hz. Operates from 9 to 18 VDC. 5.5 x 4.3 x 2.5 inches.

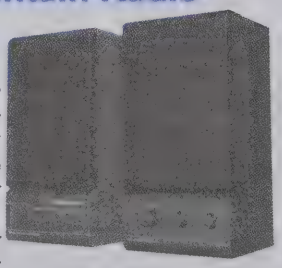
CLR/SPKR *Order #4964* **$209.95**

ICOM SP-23

The **Icom SP-23** speaker matches many Icom receivers and transceivers. It is 8 ohms and is rated at 2 watts [4 watts maximum]. The SP-23 has four separate audio network filters [HPF1 500 Hz, HPF2 250 Hz, LPF1 3000 Hz, LPF2 1000 Hz]. This allows you to tailor the frequency response of the speaker. Input A or B may be selected so two radios may share this speaker. There are two 3.5mm mono audio input jacks on the back panel. There is a speaker on-off switch and a 1/4" headphone jack on the front panel. The bottom panel of the speaker features a pull-out tilt stand if you wish to angle the speaker. A single audio cable is supplied with a mono mini plug at both ends. Metal construction 5.75 x 4.25 x 11.2 inches 3.6 lbs.

List $265.00 *Order #1696* **$199.95**

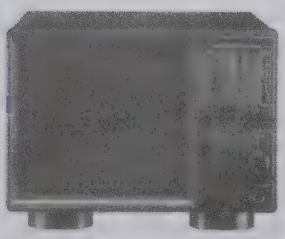
West Mountain Radio COMspkr



The **West Mountain Radio COMspkr** is expressly designed for use with the PC in your ham shack. If you, your family or your neighbors haven't heard your signal coming from their computer speakers you are quite a lucky ham. The COMspkr will solve this interference problem. The COMspkr is an RF proof amplified stereo computer speaker system, designed for the computer in your ham station or any computer near your ham station. The audio quality is good for music or voice with 3 watts per channel. They may be used in mono or stereo arrangements with a radio, computer, or MP3 player. These speakers require 120 VAC. Each is 4.2 x 8.4 x 5 inches.

COMspkr *Order #5042* **$39.95**

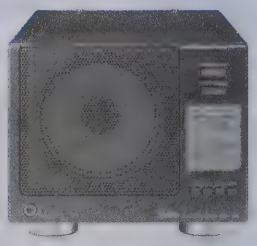
SP-2000



The **Yaesu SP-2000** speaker matches the FT-2000 series. It features a 4.7 inch speaker along with a three-selection High-Cut and two-selection Low-Cut Audio Filter system. Selection of the cutoff frequencies may be performed from the front panel of the speaker: 2.4 kHz / 1 kHz / 700 Hz for High Cut and 500/300 Hz for Low-Cut. A headphone jack on the front panel is post-filtration. The SP-2000 features dual audio inputs.

List $280.00 *Order #2604* **$199.95**

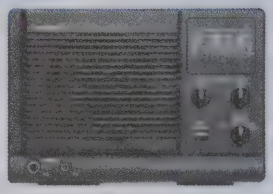
ICOM SP-34



The **Icom SP-34** speaker is designed for use with a wide variety of communication equipment. The SP-34 is equipped with four audio network filters for maximum control of the audio characteristics of received signals [cutoffs: HPF1 300 Hz, HPF2 600 Hz, LPF1 2400 Hz, LPF2 800 Hz]. The SP-34 rear panel features two audio 3.5mm input jacks. Input A or B may be selected from a switch on the front of the speaker. There is also a Speaker On/Off switch and a post filtration 1/4 inch headphone jack on the front panel. Icom includes two 3.5 mm mono audio cables. Frequency response: 100 to 9000 Hz. Five inch, 8 ohm speaker. 7.875 x 5.875 x 13.375 inches 6.6 lbs.

List $465.00 *Order #5917* **$319.95**

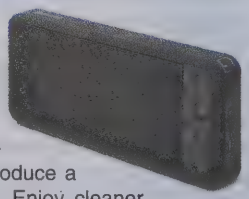
YAESU SP-8



The **Yaesu SP-8** speaker features both a 1/4 inch headphone jack and a 3.5mm mini jack on the front panel. Input A or B may be selected by a push button switch on the front panel. The panel also has a 4 position mode switch: Mute, Manual, SSB, CW. There is a 3 position Low Cut Filter knob and 4 position High Cut Filter knob. The rear panel has Input Jack A, Input Jack B and a Line Out Jack. All three of these jacks are RCA Phono type. Includes one audio cable (RCA to 3.5mm). The SP-8 has adjustable front feet.

List $250.00 *Order #1789* **$189.95**

SANGEAN BTS-101



The **Sangean BTS-101** Bluetooth portable speaker has two high power acoustic drivers accompanied by a passive sub woofer to produce a wide audio spectrum. Enjoy cleaner, richer and longer lasting sound when you are on the go. The built in 2200 mAh rechargeable Li-ion battery provides up to 12 hours of streamed music (or 15 hours using the Aux-in). The battery charges in under 5 hours. And Bluetooth pairing has never been easier. The NFC technology lets you connect your portable devices with a single touch. Just touch your NFC device to the speaker to complete the Bluetooth set-up! The Aux-In cable and USB-A to Micro-B cable are both included.

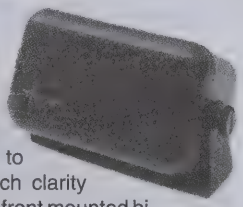
BTS-101 *Order #6386* **$89.95**

HEAR IT MODULE

The **Gap *Hear It* Module** is an in-line filter with up to -20dB of noise attenuation selectable at 8 levels. It features a sensitivity control knob. Audio input and output is via 3.5 mm mono mini jacks or RCA phone and there is a headphone jack. Requires 12 to 24 VDC at 500 mA. Supplied with a 3.5-3.5mm audio cable and fused power leads. This device does not have a built-in speaker. Made in England. 6.75 x 3.325 x 1.375" 1 lb.

IN *Order #4048* **$214.95**

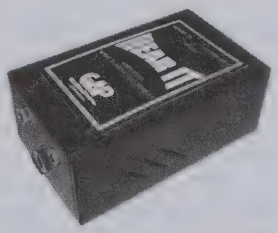
HEAR IT



The **Gap *Hear It*** is a compact speaker with digital signal processing that reduces noise to improve the signal to noise ratio and speech clarity for AM, FM or SSB. A front mounted bi-color LED shows you when the speaker is drawing power (red) and when it is processing (green). The rear panel features a rotary switch used to set the 8 levels of noise cancelling. It also has the DC input jack for the required 12-28 VDC. With audio cable to mini plug. 4.5 x 3.8 x 2.3". MkIII version.

HIS *Order #0749* **$167.95**

ANEM



The **Gap Amplified Noise Eliminating Module** simply fits in-line between the radio and speaker to solve noise and interference problems in voice radio communications. Simple operation via two pushbuttons: power on/off audio bypass and DSP filter on/off. 4 or 8 levels of noise cancellation are selectable via the pushbuttons on power up. With a fused DC power lead and a mini mono plug lead. Requires 13.8 VDC at 300 mA.

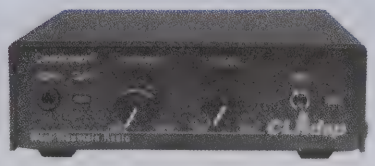
ANEM *Order #3760* **$184.95**

MFJ-722B

The **MFJ-722B** is a SSB/CW tunable 70dB notch audio filter. It has an eight pole active IC filter and uses cascaded low-Q stages. In the CW mode, four bandwidths are featured: 80, 110, 150 and 180 Hz. The center frequency is 450 Hz up to 15 dB. Requires 12 VDC. MFJ-1312D suggested.

MFJ-722B *Order #5801* **$89.95**
MFJ-1312D *Order #2433* **$15.95**

West Mountain Radio CLR/dsp



The **West Mountain Radio CLR/dsp** installs between your radio and your station's speaker. It features a Clearspeech® DSP noise reduction processor with 3 watt amplifier. It provides extremely effective noise reduction for voice and Morse code. It has a five position rotary switch for: OFF, LO, MED, HI, and MAX noise reduction. When you plug in headphones (not included), it disconnects your external speaker. A Red LED flashes to indicate digital overload "clipping". The front panel has a 1/8 inch stereo headphone jack. The rear panel has the 12VDC input jack, a 1/8 inch mono audio input jack, 1/8 inch mono external speaker jack (4~8 ohms). 4.25 x 1.25 x 5.75 inches. The CLR/dsp comes with a 6 foot power cable with Powerpole® connectors and 6 foot audio cable with 1/8 inch stereo plugs at each end.

CLR/dsp *Order #2225* **$199.95**

MFJ-784B

The **MFJ-784B** tunable DSP audio filter can simultaneously eliminate heterodynes, reduce noise *and* reduce interference in nearly any mode. You get 5 tunable DSP filters, plus 10 programmable filters. The automatic notch zaps hets, adaptive noise reduction reduces fatigue and the highpass-lowpass and tunable bandpass filters give you effective tools to dig out the weak ones. Requires 10-16 VDC @500mA (MFJ-1312D). 9.5 x 2.5 x 6".

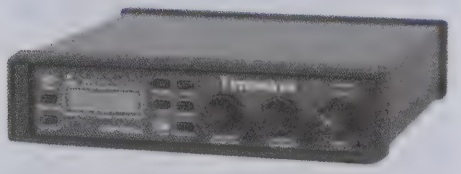
MFJ-784B *Order #3470* **$249.95**
MFJ-1312D *Order #2433* **$15.95**

MFJ-781

The MFJ-781 is an external DSP filter for any TNC or Multimode data controller. Copy signals buried in noise and QRM - signals you can't even hear! MFJ-781 gives you an arsenal of 100 incredibly sharp No-Ring linear phase FIR filters. This filter plugs between radio and TNC (RCA phono jacks). Input/output level controls. Accurate input level indicator. AGC, on/off bypass switch, built-in automatic self test. This item requires 10-16 VDC @500 mA. The optional MFJ-1312D power supply is suggested. 4.5 x 2.2 x 6 inches.

MFJ-781 *Order #3467* **$139.95**
MFJ-1312D *Order #2433* **$15.95**

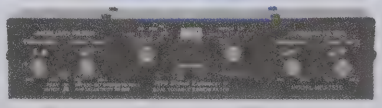
TIMEWAVE DSP-599zx



The **Timewave DSP-599zx** represents the latest generation of DSP filter, incorporating the newest high speed CPU. The new LCD display, push buttons and Visible Memory let you see the exact settings of the filters. The DSP-599zx works in all modes. It is a dream for the non-voice modes. Data modes supported in the filter are RTTY, AMTOR, PACTOR, G-TOR, HF Packet, SSTV, WeFax, SITOR and Clover. An added benefit of the powerful DSP processor and LCD display is a special "Test Instrument" mode. Functions such as audio sine wave generator, audio millivoltmeter (20 Hz-10 kHz) and CTCSS encoder/decoder are supported. Requires 12-16 VDC at 1A or optional AC-8. 7.6 x 1.9 x 8.5" 2 lbs. This is a well built, quality instrument.

DSP-599zx *Order #3630* **$399.95**
AC-8 *Order #1754* **$22.95**

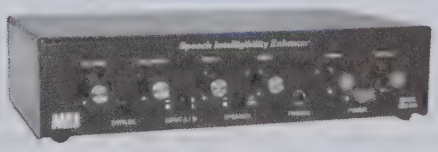
MFJ-752D



The **MFJ-752D** *Signal Enhancer II* is a dual tunable audio filter suitable for amateur and SWL use. The primary filter is a two section, four-pole variable filter with Peak, Notch, Low Pass and High Pass functions. There is also an auxiliary filter which is a single section two- pole Peak and Notch filter which allows you to remove interference *while* enhancing the desired signal. The filter is bypassed when the unit is off. The rear panel has dual, selectable audio input jacks (RCA phono) and speaker out (RCA phono) plus a 3.5mm mini headphone jack. Requires 9-15 VDC @300 mA or optional MFJ-1312D. 9.5 x 2.5 x 4.5".

MFJ-752D *Order #5640* **$109.95**
MFJ-1312D *Order #2433* **$15.95**

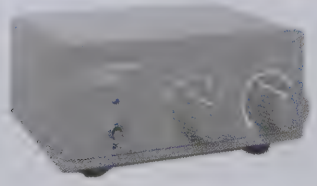
MFJ-616



The versatile **MFJ-616** filter increases speech intelligibility. It features two monolithic 2.5 watt IC amps to drive hi-fidelity speakers (not provided). Eliminate hum, buzzes, poor frequency response, low power. Works with SSB, FM, AM -- any voice mode. The front panel has: Volume, Balance, 300 Hz, 600 Hz, 1200 Hz and 2400 Hz, Bypass, Input A/B, Speaker On/Off, Power and a ¼ inch stereo headphone jack. Back panel has RCA input A and B. 10 x 2.5 x 6 inches. Requires 13.8 VDC at 1.5A or optional MFJ-1316.

MFJ-616 *Order #2377* **$174.95**
MFJ-1316 *Order #1469* **$21.95**

ApexRadio 530AP

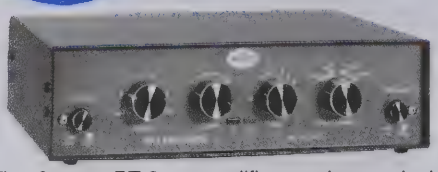


The **Apex Radio 530AP** is a receive preselector covering all medium wave and shortwave frequencies. Coverage is in five bands: 0.5-1.6, 1.6-4, 4-10, 7-20 and 12-30 MHz. The rear panel has BNC input and output jacks. This preselector requires 10-12 VDC. The power supply is not included.

530AP *Order #6146* **$199.95**

✔ Also see the:
Apex LNA-125 VHF aero preamp on page 46.
AOR LN4000 low noise preamp on page 51.

AMECO PT-3

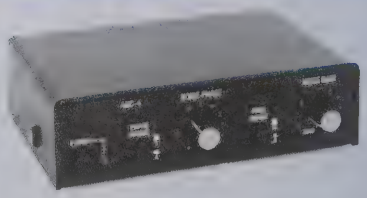


The **Ameco PT-3** preamplifier employs a dual-gate FET providing a low noise figure, thereby improving the weak signal performance of most receivers. Image and spurious rejection are greatly improved. Gain is in excess of 20 dB. Covers 1.6 to 56 MHz. The PT-3 can be used with a receiver or a transceiver (under 350 watts). The input and output are 50 ohm SO-239 jacks to match most antennas and radios. Operates on 12 VDC or with optional P12T AC adapter.

PT-3 *Order #2158* **$169.95**

P12T *Order #0167* **$14.95**

TIMEWAVE TECHNOLOGY INC. ANC-4



The **Timewave ANC-4** is an RF device designed to provide cancellation of locally generated noise from signals received by a primary antenna. The unit is employed right at the antenna connector of the receiver to cancel noise from power lines, computers, TVs or nearby equipment. Controls allow adjustment of both phase and magnitude, providing deep cancellation of the offending noise. May also be used with transceivers under 150 watts. Range: 0.1 - 80 MHz. Uses SO-239 for I/O. Requires 12 VDC (or optional AC-8 power supply *#1754* $22.95). 1.7 x 6 x 4.3 inches.

ANC-4 *Order #0094* **$199.95**

MFJ-956

This LW, MW and SW preselector tuner lets you boost your favorite stations while rejecting images, intermod and other phantom signals on your shortwave receiver. Operates from .15 to 30 MHz. Has bypass and ground positions. SO-239 accepts PL-259 connectors. 3 x 2 x 4 inches. Black.

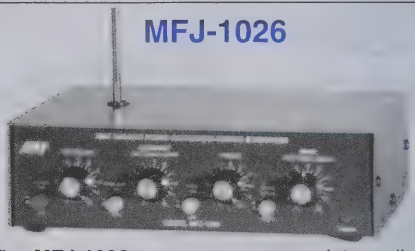
MFJ-956 *Order #2964* **$64.95**

MFJ-16010

This random wire tuner will match any wire antenna to any receiver or HF transceiver (160-10 Meters up to 200W). This device will match the impedance of your radio to the impedance of the antenna. Standard SO-239 jacks are provided for input and output. Only 3 x 2 x 4 inches.

MFJ-16010 *Order #1329* **$64.95**

MFJ-1026



The **MFJ-1026** turns your antenna into a directional phased array. The 60 dB null wipes out interference and noise, before it gets into your receiver. This device works 1.8-30 MHz in all modes including AM, CW, SSB, FM and RTTY. You can instantly change from nulling to peaking a signal at a push of a button and improve weak signal reception. You can dig out a weak station hidden under a powerful one on the same frequency. The MFJ-1026 plugs between your antenna and receiver (or transceiver). If used with a transceiver, the RF sense T/R switch bypasses during transmit. Requires 12 VDC or optional MFJ-1312D. 6.5 x 1.5 x 6.25 inches.

The **MFJ-1025** is the same as the MFJ-1026, but without the built-in active antenna.

MFJ-1026 *Order #3541* **$179.95**
MFJ-1025 *Order #3542* **$164.95**
MFJ-1312D *Order #2433* **$15.95**

MFJ-1040C

This preselector boosts signals from 1 - 54 MHz. It utilizes dual gate MOSFET, bipolar transistors for low noise and high gain. Push-button switches provide for two receivers, two antennas, 20 dB attenuator and ON/BYPASS. Controls for Delay, Gain, Band and Tune. It has a relay that automatically bypasses the amplifier when transmitting (up to 125W). SO-239 rear panel jacks provide for the use of PL-259 connectors. 6 x 2 x 6 inches. Requires 9-12 VDC (see MFJ-1312D).

MFJ-1040C *Order #4110* **$109.95**
MFJ-1312D *Order #2433* **$15.95**

MFJ-959C

The **MFJ-959C** receive-only antenna tuner covers 1.8 to 30 MHz and features a low noise 20 dB preamp to bring out weak stations and matches the antenna to the receiver for maximum signal strength. It accommodates up to two antennas and two receivers. You can select tuner, tuner with preamp, tuner with 20 dB attenuator or bypass. Rear panel jacks provide for the use of PL-259 connectors. 6.5 x 2.5 x 4 inches. Requires 9-18 VDC power supply (see MFJ-1312D).

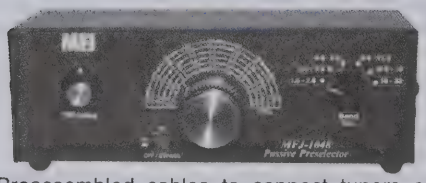
MFJ-959C *Order #2574* **$109.95**
MFJ-1312D *Order #2433* **$15.95**

MFJ-1046

The **MFJ-1046** passive (non-amplified), receive-only preselector covers 1.6 to 33 MHz in six bands. A bypass button is featured for times when you do not wish to use the preselector function. SO-239 jacks are used for input and output. Black metal construction. A coaxial jumper cable to your receiver will be required. 7.5 x 2.5 x 3.25 inches.

MFJ-1046 *Order #3736* **$109.95**

MFJ-1048



Preassembled cables to connect tuners and preamps are listed on page 56 of this catalog. The most commonly used cables are *#2579* and *#3043*.

The **MFJ-1048** passive (non-amplified) preselector covers 1.6 to 33 MHz in six bands. Unlike the MFJ-1046, the MFJ-1048 can be used for receive and transmit. An RF sense transmit/receive switch with adjustable time delay automatically bypasses your MFJ-1048 when you transmit. It also has a PTT line. SO-239 jacks are used for input and output. Black metal construction. A coaxial jumper cable to your radio will be required. 7.5 x 2.5 x 3.25 inches.

MFJ-1048 *Order #3749* **$124.95**

GRUNDIG AN200

The **Grundig AN200** is a passive, fully adjustable indoor antenna for the AM broadcast band. This inductive coupling makes it easy to use with most portables that have an AM Ferrite bar antenna. Simply placing this antenna *near* the radio will improve reception! Just adjust the AN200 tuning knob for maximum gain. There is also an output jack for a *wired* connection to radios with AM antenna terminals. The supplied cable has a 3 conductor 3.5mm plug at one end and bare wires at the other end.

AN200 *Order #0912* **$19.99**

Antennacraft FM6

The **Antennacraft FM6** is a directional FM broadcast antenna. Install this antenna to substantially improve reception of the FM broadcast band 88-108 MHz. The 70 inch boom requires a 53 inch turning radius. This antenna requires traditional 300 ohm twin lead antenna cable (not included). The mast shown is not included. 4 lbs.

FM6 *Order #5909* **$34.95**

Antennacraft FMSS

The **Antennacraft FMSS** is classic cross-dipole, non-directional FM broadcast antenna. Install this antenna in the attic, crawl space or outdoors for substantially improved reception of the FM broadcast band. Requires 300 ohm twin lead cable.

FMSS *Order #2723* **$28.95**

Philmore 5031

The economical **Philmore 5031** FM dipole antenna is your answer to improved FM reception. It has plastic tabs for easy mounting to the back of the set or to the wall. This antenna is designed for stereos, table radios and clock radios that have two screw terminal for FM antenna input.

5013 *Order #3239* **$2.49**

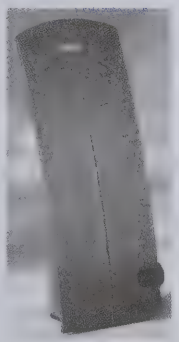
TERK

ADVANTAGE

The **Terk Advantage** is a passive, fully adjustable indoor antenna for the AM broadcast band. It uses a pre-tuning system that adjusts antenna to specific frequency for best reception. It covers 540 to 1700 kHz. It tunes stations that other antennas do not and tunes out static. The Advantage may be placed right next to or on top of the AM radio. This inductive coupling makes it easy to use with most portables. For an even higher level of performance the unit may be connected to the receiver or tuner (if it has AM antenna terminals). A six foot 300 ohm cable is supplied.

Advantage *Order #2774* **$39.95**

EDGE



The **Terk FM Edge** is a powered FM antenna designed for indoor use. Its compact size and contemporary styling let it fit in anywhere. A Gain knob lets you adjust the amplification from 0 to +36 dB. The back panel of the antenna features a 3.5mm input jack for the supplied AC adapter. There is a wired-in lead in cable that will plug into either the 70 or 300 ohm supplied antenna matching transformer. 7.5 x 2.5 x 1.25".

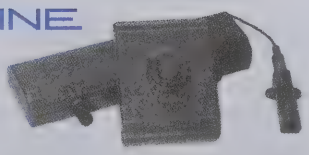
EDGE *Order #2221* **$37.95**

TOWER

The **Terk Tower** can function as an omnidirectional antenna for great reception from all directions (placed vertically), *or* as a directional antenna (placed horizontally) to zero in on distant or weak stations. It features a built-in low-noise amplifier which can be adjusted from 0dB to +25dB for best reception of weaker or stronger stations. Exclusive Air Coil technology isolates AM and FM antenna elements for increased selectivity with greatly reduced static and noise. With AC adapter and antenna matching transformer.

TOWER *Order #3979* **$23.95**

C.CRANE TCA



The **C Crane TCA** Twin Coil AM antenna works with any radio, from portables to home stereos. It includes a unique wireless ferrite stick for radios without antenna connections, *and* a wire patch cord for radios with antenna connectors. With five feet of cable to connect the antenna to the tuner.

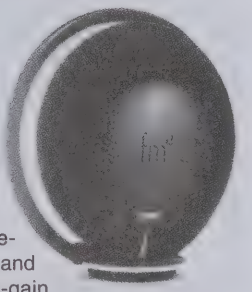
TCA *Order #3675* **$94.95**

FM Pro

The **FM Pro** is Terk's best antenna for long range FM reception. The half-wavelength folded dipole design and built-in dual-mode amplifier provide clear and powerful reception of both distant and close FM stations. A slim-profile design allows easy mounting under a windowsill, on a rooftop, on a wall or in any number of locations inside or outside a home. The dual-mode amplifier allows 11 dB of amplification or bypass mode for optimum reception of strong signals. Has "F" connector for cable (not included). With AC adapter and matching transformer. 57 x 2.5 x 1.25 inches.

FM Pro *Order #3825* **$99.95**

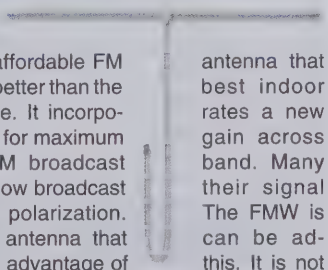
PI-B



The **Terk PI-B** AM/FM improves both short and long-range radio reception. The compact PI is big in performance. The exclusive Gamma-Loop® technology reduces FM interference and it has a built-in high-gain, low-noise FM amplifier that can be adjusted to strengthen reception of weaker or distant stations, without over-boosting stronger or closer stations. The FM reception pattern is omnidirectional. The non-skid base keeps the antenna in place during adjustment. Output to AM is twinlead wire and FM is in the form of a push-on *F* connector. A matching transformer is also supplied to be used if your radio has FM terminals. Includes AC adapter.

PI-B *Order #1718* **$44.95**

C.CRANE FMW



The **C Crane FMW** is an affordable FM antenna that is equal to or better than the best indoor antenna made. It incorporates a new dipole design for maximum gain across the entire FM broadcast band. Many FM stations now broadcast their signal with circular polarization. The FMW is the only FM antenna that can be adjusted to take advantage of this. It is not affected as much by surrounding objects and people like other FM antennas. Comes with "F" connector, balun spade connector and alligator clip. 54 inch element with an 8 foot feed line 8.5 oz. White.

FMW *Order #0143* **$29.95**

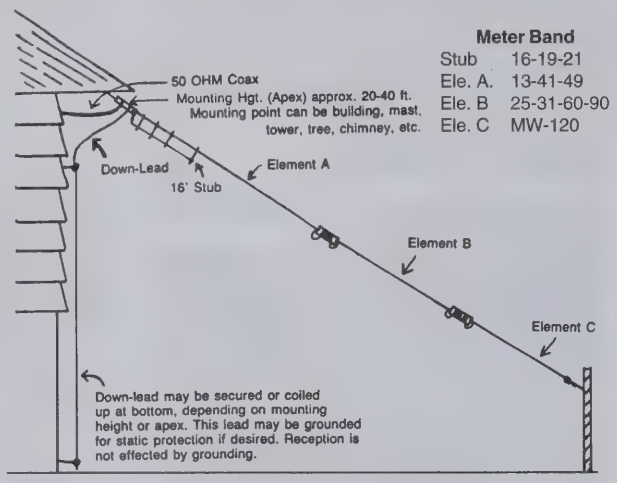
ALPHA DELTA

DX-SWL SLOPER

The **Alpha Delta DX-SWL** Sloper antenna offers exceptional features and performance! Hams have been using slopers for years because they offer some unique advantages not found in other antennas. Sloper (or slant) antennas require only one elevated support (25 feet or higher) while dipoles require two elevated supports. The DX-SWL Sloper offers coverage of the 90 and 120 meter bands, bands often "forgotten" by other antennas; plus medium wave too! The full-size DX-SWL covers:

Medium Wave .5-1.6 MHz.	120 Meters 2.3-2.5 MHz.	90 Meters 3.2-3.5 MHz.	60 Meters 4.7-5.0 MHz.
49 Meters 5.9-6.2 MHz.	41 Meters 7.1-7.3 MHz.	31 Meters 9.5-9.9 MHz.	25 Meters 11.6-12 MHz.
21 Meters 13.6-13.8 MHz.	19 Meters 15.1-15.6 MHz.	16 Meters 17.5-17.9 MHz.	13 Meters 21.4-21.8 MHz.

The overall length of the slope wire is only 60 feet long. A single 50 ohm feed point (for PL259) at the apex of the antenna is provided for maximum DX reception. (User supplies their own 50 ohm coaxial lead-in). The DX-SWL is fully assembled for easy installation. It requires no adjustments or "trimming". This American made antenna has stainless steel hardware for long life and utilizes low-Q RF choke-resonators for efficient multiband frequency selection. For quality of construction, ease of erection and maximum performance, we think the Alpha-Delta DX-SWL is a great value. It is our best selling shortwave antenna.



Where less space is available, consider the **DX-SWL-S** shortened version - only 40 feet long covering the 90 through 13 meter bands.

Alpha Delta DX-SWL (MW+120-13m) 60 ft.
Order #0799 ..... $**118.95**

Alpha Delta DX-SWL-S (90-13m) 40 ft.
Order #2533 ..... $**117.95**

See page 56 for optional preassembled lead-in cables.

ALPHA DELTA

DX ULTRA

The **Alpha Delta DX-ULTRA** is specifically designed for high performance, *full spectrum* shortwave coverage plus MW. Absolutely remarkable low-noise, high-gain results are achieved as a result of the tapered wing design and ISO-RES inductors and parallel wire elements. The Delta-C center insulator with built-in SEP Arc-Plug static protectors, provides protection for sensitive receiver components. This antenna must be center fed with a PL-259 type plug. Fully assembled - no cutting or soldering required.

Alpha Delta DX-Ultra (0.5-30 MHz) 80 foot
Order #3377 ..... $**158.95**

Support poles shown, not included. Please see page 56 for optional preassembled coax lead-in cables.

ANTENNA SUPERMARKET

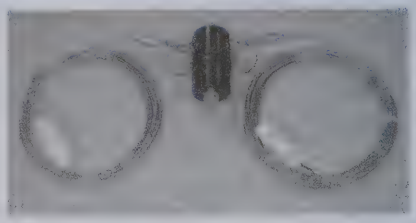
EAVESDROPPER SWL SLOPER

The Antenna Supermarket company, famous for their **Eavesdropper** trapped dipole, also offers a sloper design antenna that covers all the major shortwave broadcast bands 120 through 11 meters plus medium wave. It requires one high support like the DX-SWL above and includes PL-259 type fitting for user supplied lead-in. 67.5 ft. long. Now includes integrated ZapTrapper™ lightning arrestor. Note: Please see page 56 for preassembled coaxial lead-in cables.

Eavesdropper SWL Sloper
Order #0013 ..... $**114.98**

Princeton

Sky Wire



The **Princeton SkyWire** is a 66 foot, off center fed SWL dipole with 22 feet on one side and 44 feet on the other. It provides excellent receive performance from the AM broadcast band to 30 MHz. While its rugged construction is well suited for the harshest environments, it is equally at home indoors in an attic. The wire may be bent, zig-zaged to accommodate limited space installations. Rope and coax cable are *not* included.

SkyWire *Order #5155* $**46.95**

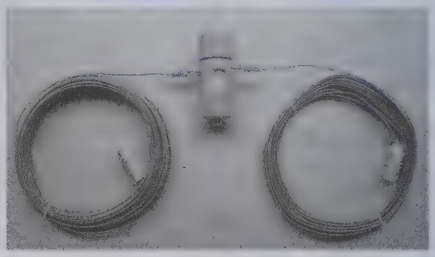
Sky Wave

The **Princeton SkyWave** is a 50 foot long, end-fed shortwave listener's antenna. It features dog-bones insulators at both ends. It is fed with a 35 foot, 26 gauge plastic coated lead-in wire. It is designed to perform well on the AM band and shortwave from 3 to 30 MHz. Rope is not included.

SkyWave *Order #5148* $**34.95**

HY POWER

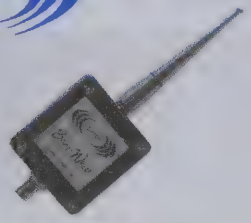
SWL-OCF



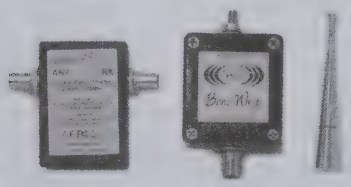
The **Hy Power SWL-OCF** "Off Center Fed" antenna covers 500 kHz to 60 MHz. It is made from 136 feet of 14 gauge insulated wire for strength and longevity. The feed network is placed 45 feet from one end of the antenna. The coaxial cable for this antenna (not supplied) is coupled through an inductive matching transformer which will place your coax at DC ground provided you make a good ground connection to the shield of your coaxial cable. For best performance you should mount this antenna at least 25 feet above ground. You can bend the antenna's legs to fit your property if needed. It can be sloped from a tree down to a fence post, hung flat between two high tie points or even as an inverted vee. This antenna requires the following items which are not included: rope, lightning arrestor and coaxial lead-in cable.

SWL-OCF *Order #1496* $**99.95**

BONI-WHIP



The **Bonito Boni-Whip** antenna receives from 20 kHz to 300 MHz with impressive performance, despite its diminutive size. Even on very low frequencies the Boni-Whip produces very good reception results. It can be used beginning with 20 kHz and is a good choice for listeners who are interested in low frequencies. Bonito extended the range to 300 MHz for VHF enthusiasts. Because of its small size, the antenna can be erected inconspicuously. The antenna system is comprised of three elements (shown left to right):



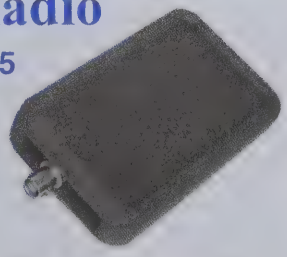
- ✔ Coaxial Power Inserter. Has jacks for:
  - BNC Antenna (to Preamp Box)
  - BNC Receiver (to your receiver)
  - 12 VDC 200mA max (2.1/5.1 mm)
- ✔ Outdoor Preamp Box. Has jacks for:
  - BNC Input from Power Inserter
  - Threaded stud for antenna element.
- ✔ Antenna Element (only 4 inches tall!)
  - Threaded base

The user must supply the BNC to BNC ohm coaxial cable to connect from the Coaxial Power Inserter to the receiver and the cable from the Power Inserter to the Outdoor Preamp box. The user must also supply the 12 VDC power cord which requires a 2.1/5.1 mm DC power plug (*#0821* 99¢). Requires 12-15 VDC 200 mA [+]. Made in Germany.

Order #2531 **$139.95**

ApexRadio

MW115

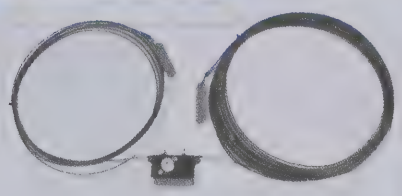


The **Apex Radio MW115** is a *very* compact portable active receive antenna for 500 kHz to 30 MHz. Output to the receiver is a BNC jack. Supplied with a 39" BNC to BNC cable. Operates from two AAA batteries (not included). 2.75 x 4.6 x 0.8" 6 oz.

MW115 *Order #6353* **$99.95**

■ Lightning surge protectors are recommended for outdoor antennas. Please see page 49.

SWL-OCF1



The **Qikzepp SWL-OCF1** is a 65 foot, off center fed SWL dipole with 10 feet on one side and 55 feet on the other. It use low visibility AWG #18 copper coated steel wire with a black weatherproof polyethylene insulation. This antenna may be configured horizontally or as a sloping antenna. The isolation transformer provides Galvanic isolation with a separate winding for the primary and secondary sides of the transformer. It breaks or eliminates ground loops and the noise associated with them. It also converts the unbalanced signal of the antenna to a balanced signal for transport over coaxial cable.

SWL-OCF1 *Order #1899* **$62.95**

TPA

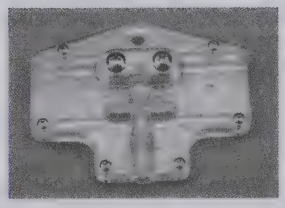
The **Ameco TPA** is a dual-function device. It is a sophisticated dual-gate FET preamp covering 220 kHz to 30 MHz with over 20 dB gain. And you can use the TPA as an indoor active antenna by extending the 30 inch built-in telescopic whip! Input from the external antenna and output to the receiver is RCA phono jack (coax cable to radio not suppled). The TPA runs on a 9V battery (not included) or with optional P-9T adapter.

Ameco TPA *Order #1512* **$84.95**
Ameco P9T *Order #0474* **$9.95**

The **CoaxPLRCA** is 3 foot RG58/U coaxial cable with an RCA phono plug and PL-259 plug.

CoaxPLRCA *Order #3043* **$5.99**

TEN-TEC 3003 Acro-Bat



The UV resistant **Ten-Tec Acro-Bat** can be used to suspend either a ladder line-fed or small gauge RG-58 or RG8X coax-fed wire antennas.

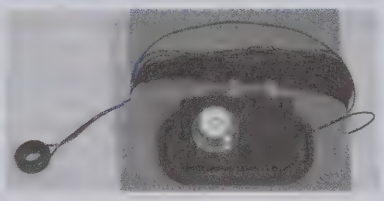
3003 *Order #3720* **$9.95**

RF systems GMDSS

The **RF Systems GMDSS** is a non-amplified vertical receiving antenna covering 100 kHz to 25 MHz and is optimized for Global Marine Distress & Safety System frequencies including the long wave NAVTEX frequencies. It uses passive magnetic transfer technology to deliver a good signal with low noise high complete immunity to receiver overload from nearby transmitters. The MTA provides broadband performance, yet does not require an antenna tuner. The antenna consists of a weatherproof plastic pipe, 1.5 inches in diameter and 7 feet long. The SO-239 connector in the metal base is sealed.

GMDSS *Order #4118* **$259.98**

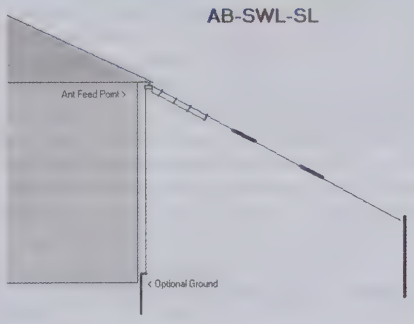
SWL-73



The **Universal SWL-73** end-fed short wave antenna is designed for reception from 3-30MHz. It is great for field use, unobtrusive installations or your emergency go-bag. It uses 29 feet of light weight 26g wire and is intended for indoor or temporary portable outdoor use. The SO-239 jack accepts your PL-259 coaxial cable (not supplied). With 10 feet of mounting rope and cloth travel bag.

SWL-73 *Order #4073* **$49.95**

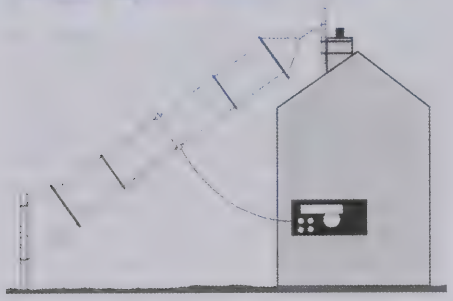
HY POWER AB-SWL-SL



The **Hy-Power AB-SWL-SL** shortwave sloper is a top quality receiving antenna for these shortwave broadcast bands: 160, 120, 90, 60, 49, 41, 31, 25, 19, 16, 13, and 11 meters plus the AM broadcast band. This antenna is 62 feet long and made with 12 gauge insulated wire using all stainless steel electrical hardware. The 12g wire adds strength to the antenna and the insulation gives the antenna UV protection for longevity. It features both an SO-239 jack to accept coaxial lead-in *or* dual spade-lug terminals to accept twinlead. The AB-SWL-SL is fully assembled. Just add your lead-in cable and rope. The ground wire and ground rod shown above are not included.

AB-SWL-SL *Order #5062* **$89.95**

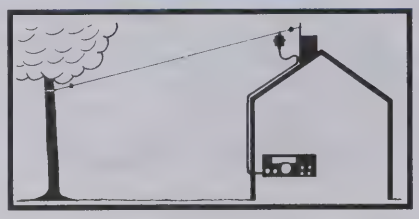
RF systems T2FD



The RF Systems T2FD is a receive antenna covering 3 - 35 MHz, in common use by military and government receiving establishments. There are good reasons for this choice by the professionals. The antenna is terminated internally with its characteristic impedance. This means that the antenna is not as sensitive to annoying man made interference sources such as fluorescent lights, dimmers, televisions, etc. The antenna is also less prone to noise from natural sources, due to static. This really is a low noise antenna. By ensuring a constant impedance through out the length of the antenna, (the T2FD is a travelling wave antenna), the T2FD is also less prone to distortion due to multipath fading. Independent tests have shown that when compared to dipole or long-wire antennas, the background noise is not only much lower, but weak signals suffer less distortion. The T2FD has a wide bandwidth. Dipoles, trap dipoles and similar types of antenna work well on one or a number of frequency bands in the shortwave spectrum. But outside these bands, reception is worse. Common coax may be used as lead-in the receiver, reducing or eliminating interference from equipment such as computers, fluorescent lights and dimmers. The characteristic impedance of the T2FD has been raised to 550 ohms. Thanks the development of a special frequency-compensating 11:1 transformer, the antenna is perfectly matched to the 50 ohm coaxial cable and the input of most communications receivers. The antenna is waterproof and is made of UV-resistant plastics and stainless steel fasteners. This passive antenna is assembled and ready to install. Nylon support cord is included. It is only 45 feet (15 meters) in length. The T2FD has an SO-239 jack to accept PL-259. The lead-in coax, house and radio shown above, are not provided. (This antenna is for receive only).

T2FD *Order #0562* **$398.98**

RF systems MLB-MK1/MK2



This may look like a conventional wire antenna kit at first glance, but it is much more. It consists of a heavy duty 41 foot wire, nylon rope and a quality insulator. At the feed-line end the antenna is terminated with the *RF Systems'* patented Magnetic Longwire Balun. This balun permits an exceptionally low loss transference of antenna energy to your coax feed line. The result is significantly reduced static noise on long, medium wave and the tropical shortwave bands (60 & 90 meters). We have tested this antenna at Universal and we are impressed. It is for *receive only* covering 0.1 - 40 MHz. Requires 50 ohm coax cable not included (except MK3 and MK4 which include 49 foot coax).

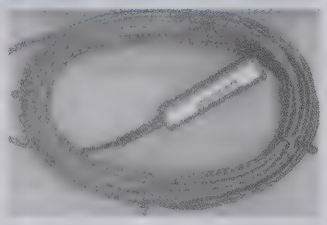
MLB-MK1 *Order #0000* Discontinued

66 ft. version (.1-30 MHz) for improved LW & MW.
MLB-MK2 *Order #0883* **$148.98**

The MK3 is a stainless steel version of the MK1.
MLB-MK3 *Order #0000* Discontinued

The MK4 is a stainless steel version of the MK2.
MLB-MK4 *Order #4068* **$299.98**

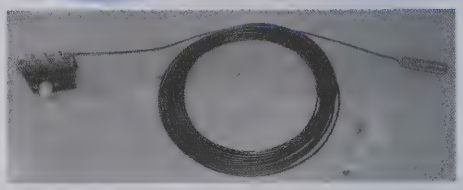
MLB MARINE BALUN KIT



The **RF Systems MLB Marine** balun kit is designed to attach to an isolated stay or length of wire (18 to 90 feet) on a sailboat. The balun system consists of a 3.5" inch stainless steel cylinder attached to 45 ft of RG-58 coax cable to PL259 (cable may be shortened) This will result in an efficient, self matching antenna system for receive only in the range of 100 kHz to 30 MHz. The MLB Marine is completely waterproof. Please ask for a free specification sheet.

MLB Marine *Order #1511* **$169.98**

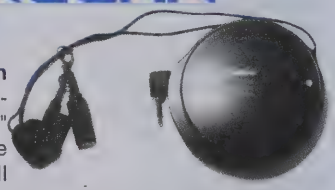
PAR EF-SWL



The **LNR Precision Par EF-SWL** is an end-fed short wave antenna optimally designed for 1-30 MHz reception. The radiator is 45 feet of genuine #1 gauge black polyethylene coated Flex-Weave wire. This material is very strong yet can easily be coiled like a rope for portable work. The UV resistant matchbox houses a wideband 9:1 transformer wound on a binocular core. Unlike other transformers, external stainless studs on the matchbox allow the user to configure the primary and secondary grounds for best noise reduction at their particular location. Output is via a silver/teflon SO239 UHF connector. The radiator also attaches via a stainless stud allowing it to be removed, or replaced with a different length radiator for experimental purposes. The newly redesigned snag-proof insulators are very strong. The included manual shows typical radiation patterns for selected frequencies through-out the HF spectrum. For receive only.

Par EF-SWL *Order #2205* **$72.95**

SANGEAN ANT-60



The **Sangean ANT-60** portable "roll-up" shortwave antenna will improve the reception of any portable worldband receiver. The antenna wire may be extended up to 23 feet. The ANT-60 terminates with a mini-plug (3.5 mm). If your receiver does not have a mini external antenna jack, an adapter plug is provided to clip the ANT-60 to your radio's whip.

ANT-60 *Order #3184* **$12.95**

COAX-SEAL SEALANT

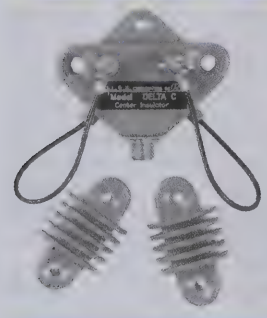
Use **Coax-Seal®** to protect any outdoor connection or connector. Coax-Seal is superior to electrical tape or vinyl sealant for moisture protection. The **104** consumer box features one roll which is 60 inches long and ½ inch wide. It will protect 9 connectors.

Coax-Seal 104 *Order #1194* **$2.99**

The **105** commercial box features four rolls, each of which is 12 feet long and ½ inch wide.
Coax-Seal 105 *Order #4960* **$19.95**

The **106** commercial box features four rolls, each of which is 12 feet long and 1 inch wide.
Coax-Seal 106 *Order #4961* **$24.95**

ALPHA DELTA DELTA-C

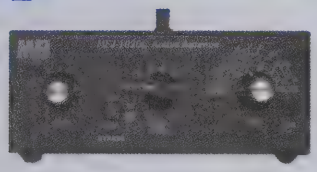


The **Alpha Delta Delta-C** antenna hardware kit consists of: 1 Delta-C Center Insulator, antenna connecting hardware, 1 SEP Arc-Plug™ static protector (installed in Delta-C) and 2 Delta-CIN end insulators. This kit does *not* include the antenna wire or rope. The Delta-C components are molded of high impact UV and RF resistant materials called Deltalloy™. For proper operation of the SEP Arc-Plug it will be necessary to ground the coax shield at the entrance to the building. Your radio may already meet this requirement if your coax shield circuity is grounded to a ground bus, strap, or ground rod through the connector of your coax.

Delta-C Kit *Order #0297* **$29.95**

The **Delta-CIN** end insulators are also sold individually.
Delta-CIN *Order #2420* **$1.50**

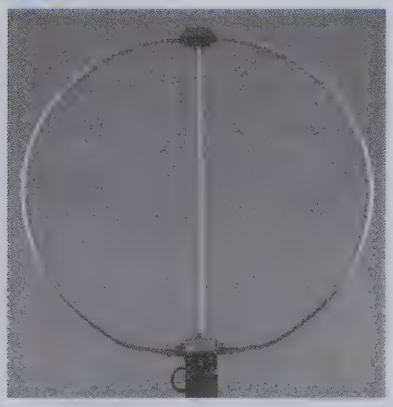
MFJ-1020C



The **MFJ-1020C** indoor active antenna offers good performance from an very compact package. This antenna system can be set directly on your desk and covers 300 kHz to 30 MHz in five bands. With built-in 20 inch (50 cm) telescopic antenna. An auxiliary antenna jack is provided. When it is used the MFJ-1020C functions as a preselector. Front controls include gain, band select, tune and On/Bypass. A red LED indicates power ON. The input jack and output jack are both SO-239 type (to accept PL259). Black metal case 6.4 x 2.5 x 3.3 inches. Requires a 9 volt battery or a 12 VDC power supply such as the MFJ-1312D.

MFJ-1020C	*Order #1413*	$89.95
MFJ-1312D	*Order #2433*	$15.95

Pixel RF PRO-1B



The **Pixel Technologies RF PRO-1B** magnetic loop antenna provides exceptional MF/HF performance, even in high noise environments. The RF PRO-1B is a broadband, magnetic, directional receive loop antenna covering 50 kHz to 30 MHz. It provides several key advantages over traditional shortwave antennas. At only 38 inches wide, it is compact and unobtrusive. It is designed to operate from the magnetic component of the radio signal, and is therefore more immune to man-made interference. It can even operate at ground level. No tuning is required. It is directional. The user must supply their own antenna rotor, rotor cable and quad-shielded RG6 coaxial cable (see "**CC**" cables below) from the power inserter to the loop antenna. A three foot cable with PL259 plug from power inserter to your receiver is supplied.

RF PRO-1B *Order #6142* $499.99

Order#	Model	Length / Connectors	Price
#6148	**CC- 50**	50 Feet F to F RG6	$46.95
#6149	**CC-100**	100 Feet F to F RG6	54.95
#6150	**CC-150**	150 Feet F to F RG6	62.95
#6151	**CC-200**	200 Feet F to F RG6	70.95

See AR303/AR500antenna rotors on page 102.

MFJ-1024

The **MFJ-1024** is a sensitive outdoor active antenna covering 50 kHz to 30 MHz. The outdoor unit consists of a 54" telescopic whip & amplifier module (3 x 4 x 4 inches). It is connected to the indoor control unit (6 x 2 x 5 inches) by a supplied 50 foot RG-58 coaxial cable. The control unit features a 20 dB attenuator and a gain control to prevent receiver overload. A built-in receiver switch selects between two receivers and an antenna switch selects an auxiliary antenna. A red LED indicates power-on. The auxiliary input and output jacks are RCA phono type. Requires 12 VDC power supply such as the MFJ-1312D.

MFJ-1024	*Order #1132*	$144.95
MFJ-1312D	*Order #2433*	$15.95

MFJ-1022

The compact **MFJ-1022** wideband indoor active antenna boasts coverage from 300 kHz to 200 MHz. It includes a detachable 20 inch antenna. The output jack is an SO-239. A red LED is on the front panel to remind you that the antenna is on. This device requires a 9 volt battery (not supplied) or a 9-18 VDC external power supply, such as the MFJ-1312D.

MFJ-1022	*Order #3109*	$64.95
MFJ-1312D	*Order #2433*	$15.95

KAITO ELECTRONICS INC KA33

The **Kaito KA33** is an active shortwave, wire loop antenna that covers AM plus shortwave 3.9 to 22 MHz. The KA31 has dual outputs. If your portable shortwave radio has an 1/8 inch mini antenna jack you can plug this antenna directly in. For shortwave radios without an antenna jack, you also get simple clips for direct connection to the radio's telescopic whip antenna. The control box has an LED to remind you when the antenna is turned on. There is a Tuning Knob on the control box that should be adjusted as you change frequency. This antenna is designed for indoor use only and requires two AAA cells (not provided).

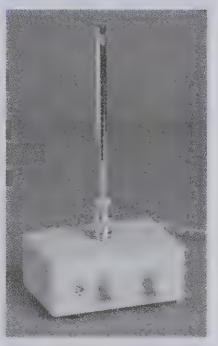
Kaito KA33 *Order #3670* $36.95

ApexRadio 303WA-2

The **Apex Radio 303WA-2** is a quality passive receiving antenna providing coverage from 30 kHz to 30 MHz. The antenna is designed for areas where space is a problem or when an unobtrusive installation is essential. The small size and relatively lightweight design is ideal for installation in a confined space such as apartment balcony. Since the 303WA-2 is passive it provides superior low noise performance, free of cross and inter-modulations. The 303WA has a "U" bolt metal fitting that will require a short stub mast (not supplied). The mast diameter can be 0.4 to 1.9 inches. The antenna has a total height of 6 feet. It comes with a pre-assembled 30 foot length of cable with a PL259 plug to connect to the antenna base and a BNC plug for your radio.

Order #1026 $119.95

ApexRadio 700DTA



The **Apex Radio 700DTA** is a compact active antenna that employs a Hi-Q manual tuning circuit plus a high gain amplifier providing 20dB gain from 500 kHz to 30 MHz in four bands: 0.5-1.6, 4-10, 7-20 and 12-30 MHz. The supplied telescopic antenna (6-23 inch) plugs into a BNC jack on top of the unit. Output to the receiver a BNC jack. Supplied with a 10 foot BNC to BNC cable. Operation is from a 9 volt battery (supplied).

700DTA *Order #3872* $169.95

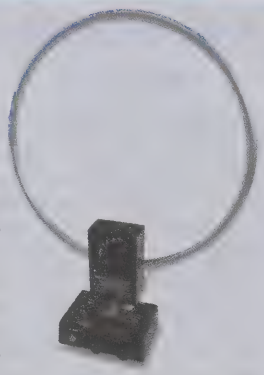
RADIOMASTER P-30

The **RadioMaster P-30** is an unobtrusive 15 foot passive wideband, indoor/outdoor long wave, medium wave, shortwave wire antenna. It features a built-in matching transformer that ensures 50 ohm impedance so no antenna tuner is required. This omnidirectional antenna is very low noise. The P-30 features a 15 foot RG-174 coaxial lead-in that is part of the antenna system. It terminates in a PL-259. This antenna and lead-in are completely preassembled. A short length of white nylon cord is supplied for stringing if needed.

Radiom. P-30 *Order #1331* $79.98

AOR

LA400

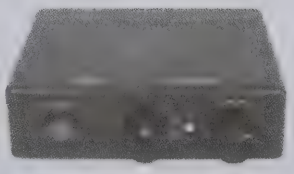


The **AOR LA400** is a wide range receiving antenna covering 10 kHz to 500 MHz. There are four selectable band ranges from 150 kHz to 30 MHz that allow manual tuning (fixed operation for 10-149 kHz and 30-500 MHz). Exceptional 20dB gain is realized, thanks to a built-in low noise amplifier. This indoor antenna works effectively against local noise from electrical devices such as televisions, PCs, fluorescent lightening, dimmers, etc. This supplied loop element has a 1 foot diameter. Unlike previous amplified indoor loop antennas, the band switching and fine tuning controls are not tied to the loop element. With these controls now on the control box and by using the optional LA400-RCK (*#4695* $88.95) 32 foot extension cables it is possible to tune the antenna while the loop element is setup at the best location possible. Output is a BNC jack. A 3.3 foot BNC to BNC patch cable is provided. Operates from 12 VDC or via supplied AC wall adapter. List $575.00.

LA400 *Order #5051* **$519.95**

AOR

LA800



The **AOR LA800** is a wide range receiving antenna that covers from 10 kHz to 500 MHz (tunable between 150kHz to 30MHz). The control box has 6 ranges. The diameter of the loop is 2 feet 8 inches (80 cm). The LA800 comes with 33 foot (10 m) each of low loss coaxial cable and extension remote cable for remote tuning. Output is via a BNC jack. A 3.3 foot BNC to BNC patch cable is provided. This antenna operates from 12 VDC or via the supplied AC wall adapter.

LA800 *Order #5919* **$799.95**

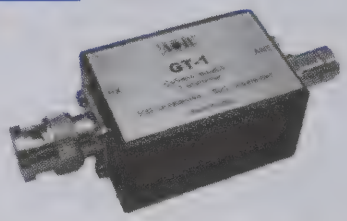
AOR

SA7000

The **AOR SA7000** super wide range receiving antenna covers from 30 kHz to 2 GHz. This 6 foot (1.82 m) passive antenna has two vertical elements with built-in duplexer. It includes 50 feet of RG-58 coax lead-in to a BNC plug. The SA7000 is a strong choice for the AOR AR5001D, AR8200 or AR8600. *Order #3755* **$279.95**

AOR

GT-1



The **AOR GT-1** may be connected between the receiver and the LA400 antenna. It will greatly reduce local noise by breaking the ground loop effect between antenna and the receiver, especially when the LA400-RCK separation cables are used. Please note that the supported frequency range for this device is 40 kHz to 30 MHz. The output to the receiver is BNC male. It may be directly connected to the receiver. The antenna input to the GT-1 is BNC female.

GT-1 *Order #4893* **$59.95**

COMET

BR-200

The Comet BR-200 is a wideband base receive active antenna covering 500 kHz to 1300 MHz. The antenna gain is 3-7 dBi depending on frequecy. The integrated amplifier provides 30 dB gain on HF and VHF, and 12 dB above 900 MHz. A bias-tee unit is included to feed the preamp voltage up the coax line. The bias-tee requires 9-16 VDC @100 mA. The fiberglass and aluminum antenna is 54 inches 2.2 lbs. Includes bias-tee and mast mounting bracket. The user must supply the DC power source, mast and coax cable.

BR-200 *Order #6315* **TBA**

Pricing and availability for the BR-200 was still not available at press-time. Please call, or visit the Universal Radio website at **www.universal-radio.com**

■ Lightning surge protectors are recommended for outdoor antennas. Please see page 49.

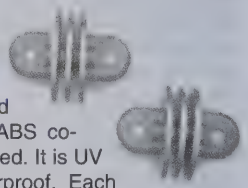
BUDWIG

DIPOLE INSULATOR

Constructing a dipole is easy with the **HQ-1** center insulator. Attach each "arm" of your dipole to this device and then screw your PL-259 into the center! You get easy assembly, the best connection, the strongest support and the most weatherproof fit.

Budwig HQ-1 *Order #1782* **$14.95**

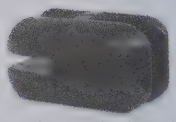
END INSULATOR



The **Budwig HQ-2** end insulator is made of ABS copolymer, 35% glass filled. It is UV resistant and weatherproof. Each HQ-2 is approximately 2 inches long. The distance from center hole to center hole is 1.25 inches. Sold in a package of two (2). ½ oz each.

Budwig HQ-2 *Order #3412* **$3.49**

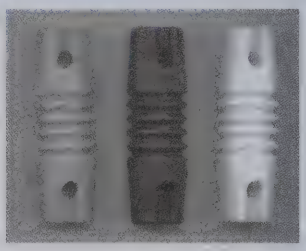
ECONOMY INSULATOR



This economy wire insulator is 1.8 inches long black and has a wire snap on one side. 0.65 oz.

C-150 *Order #4818* **$ .49**

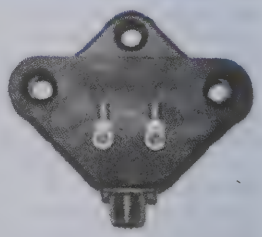
END INSULATOR



These popular "dog-bone" end-insulators are made of a strong plastic with high dielectric qualities, for excellent strength and excellent weatherability. 3 inches 1 oz. Sold separately in 3 colors.

JTGDOG Gray	*Order #5268*	**$ .79**
JTBDOG Black	*Order #5267*	**$ .79**
JTWDOG White	*Order #5269*	**$ .79**

CENTER INSULATOR



Constructing a dipole is easy with these center insulators. Attach each "arm" of your dipole to this device and then screw your PL-259 into the center! Power rating is 2000 watts RMS. Now also compatible with ladder line. Sold separately in four colors.

JTCE1B Gray	*Order #5527*	**$14.95**
JTCE1W White	*Order #5526*	**$14.95**
JTCE1BK Black	*Order #5524*	**$14.95**
JTCE1B Green	*Order #5528*	**$14.95**

PC-SGM/MKT

The **ProComm PC-SGM/MKT** is an attractive black 26 inch through-the-glass mobile scanner antenna that looks like a cellular car antenna. It covers 30 to 1200 MHz (receive only) and comes with 15 foot of RG-58U coaxial cable that terminates to a Motorola plug. ProComm includes a Motorola to BNC adapter. So it will work with scanners that use a Motorola jack *or* a BNC jack.

PC-SGM/MKT *Order #0373* **$28.95**

SCAN4

The **SCAN4** is the answer for improved scanner performance in a vehicle, without the addition of an obtrusive vehicle antenna. The SCAN4 is easy to install and consists of 5 feet of RG174 coaxial cable to a 19 inch wire antenna element. The antenna element attaches to your window via two integrated suction cups. The coax terminates to a male BNC plug. For receive only.

SCAN4 *Order #1820* **$12.95**

SFA-201B
SFA-201S

The **SpectrumForce SFA-201B** scanner antenna provides receive coverage from 25 to 1300 MHz. This diminutive antenna stands only 17 inches high, including the magnetic base. It comes with 12 feet of RG-174 coax cable that terminates to a male BNC plug.

The **SpectrumForce SFA-201S** is identical, but terminates to a male SMA plug,

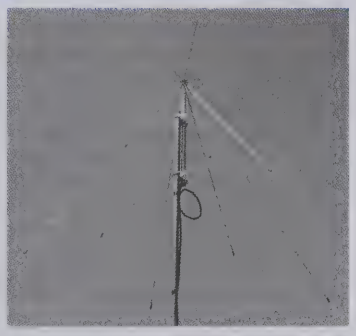
SFA-201B BNC *Order #5896* **$19.95**
SFA-201S SMA *Order #3270* **$19.95**

AM800
AM801

Use these **Opek** window antenna mounts to conveniently get your scanner's antenna outside of your vehicle for better gain! Both versions clamp on top of your auto window and feature an 8 foot RG174 coaxial cable to the appropriate SMA or BNC plug.

Opek AM800 SMA *Order #0204* **$13.95**
Opek AM801 BNC *Order #0270* **$13.95**

DA3200



The **AOR DA3200** is a 16 element, omnidirectional discone receiving antenna covering 25 to 3000 MHz. It includes 49 feet (15 m) of 5D-2V low-loss coaxial cable. There is an N male plug at the antenna end and now an N male plug at the radio end. This 45 inch antenna is great for scanners. With two U bolts. Mast shown is not supplied.

DA3200 *Order #5381* **$209.95**

MA500

The **AOR MA500** is a quality 29 inch (740 mm) magnet mount mobile antenna covering 25 to 1300 MHz. It includes a 13 foot (4 m) coax cable terminating in a BNC plug.

Order #2616 **$129.95**

DA5000

The **AOR DA5000** high performance, commercial grade UHF discone receive antenna covers 700 to 3000 MHz. It uses a low-loss N connector. Antenna gain is 2.5 dB (max.). Overall length is 1 foot. Radials are 5.7 inches. Horizontal elements are 3.2 inches. Weight is 1.6 lbs. Impedance is 50 ohms. Very low loss coaxial cable (not supplied) must be used with this antenna. The DA5000 comes with a mounting mast, mast clamp and instructions. Will accept 1 to 2 inch mast.

DA5000 *Order #0603* **$399.95**

➤ Please also see the **AOR SA7000** on page 44.

DCX

The **Hustler DCX** is a discone base antenna that provides good omnidirectional coverage from 40 to 999 MHz. This 55 inch antenna easily mounts to any mast (not supplied) with supplied hardware. Has SO239 to accept PL259.

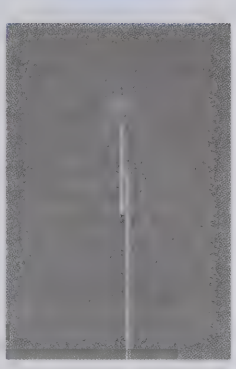
Hustler DCX *Order #1205* **$25.95**

DS150S

The **Comet DS150S** discone antenna receives solid from 25 to 1500 MHz and can be used for transmit on 50, 144, 430, 900 and 1200 MHz ham bands (under 100 watts). This stainless steel antenna is 4.6 feet high and attaches to any standard mast (not supplied) from 1.2-2.4 inches with the supplied U-bolt. Weight is 3.2 lbs. Terminates to an SO-239 and comes with a 65 foot RG-58A/U PL259 to PL259 coax cable.

Order #3587 **$94.95**

AH8000



The **Icom AH8000** is a multi-purpose discone antenna that receives solid from 100 to 3300 MHz! It can also be used for transmit on 144, 430, 1200 and 2400 MHz ham bands (under 200W). This omnidirectional antenna is 3 feet high and attaches to any 1-2 inch standard mast with two supplied U-bolts (mast shown is not supplied). 2.1 lbs. Comes with a preassembled 49 foot cable with N connectors.

AH8000 *Order #1945* **$269.95**

This adapter converts the N male to a BNC male.
UG-349/AU *Order #4571* **$4.95**

This adapter converts the N male to a PL-259.
UG-83 *Order #1384* **$4.95**

5130-2N

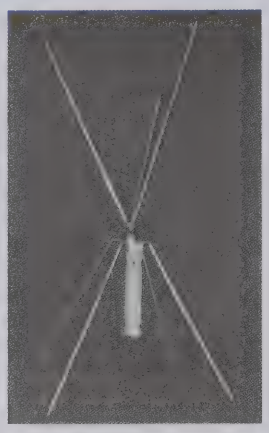
The **Create Log-Periodic 5130-2N** is a log periodic antenna for the range of 105-1300 MHz. It features 19 elements providing 10 to 12 dBi. It can be used for receive and transmit (to 500 watts). The boom length is 4 feet 6 inches and weighs only 6 lbs. It is wind rated to 90 m.p.h.. It mounts on a 1.5 to 2 inch mast. Mast and lead-in cable are not provided. A low loss N connector is utilized.

Create 5130-2N *Order #1825* **$339.95**

The **Crane SCA Gainer** is a thin, flexible 16 inch antenna for handheld scanner radios. It is optimized to receive: 120, 150, 300, 450, 800 and 900 MHz. Also good for 2 meter/440 transmit to 10 watts. This antenna terminates to a 50 ohm BNC.

SCA CG2 Gainer *Order #5387* **$19.95**

MP antenna SUPER M CLASSIC



The **MP Antenna Super M Classic Base** was designed for both amateur and scanner applications. It seamlessly receives 25 MHz to 1.3 GHz. Multi-Polarized technology with MP Antenna design and production standards make the Super M Classic™ a superior VHF-UHF receive antenna. This antenna also provides impressive transceive performance in the 2 meter, 220 and 440 MHz ham bands (up to 200 watts). Experience clearer, more consistent communications with this American made, quality antenna. This antenna terminates to a low-loss female N jack.

08ANT0863 *Order #0307* **$110.95**

Please see many more impressive **MP Antenna** scanner antennas on page 95.

COMET BNC-W100RX

The **Comet BNC-W100RX** scanner receive antenna covers 70 to 900 MHz. The telescoping base is marked with a chart. You can extend one to eight elements to optimize reception in a given band. It features a double fold-over hinge for convenience. The telescopic whip antenna is 40 inches extended, but collapses down to 8 inches. It terminates to a male BNC plug.

BNC-W100RX *Order #5458* **$29.95**

ProComm Inc. SP-800

The **Procomm SP-800** ***Spider*** is a base scanner antenna capable of working with most any VHF/UHF scanner receiver. It covers 30-1200 MHz (receive only). Two adjustable mounting bands are supplied to fasten the base to a mast or vertical railing. The antenna terminates to a standard SO-239 jack.

SP-800 *Order #5531* **$39.95**

Dragon STB2

The **Dragon STB2** is a low gain scanner antenna expressly designed for short range reception. Yes, there are times where you want to restrict the range of your scanner. This is especially true at sporting events such as car races. This antenna is less than 1.5 inches tall and terminates to a BNC.

STB2 *Order #4045* **$9.95**

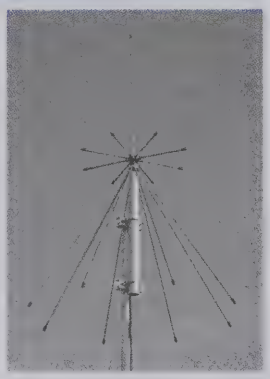
✔ Don't forget **Coax-Seal®.** Please see page 42.

COMET HT-55

The **Comet HT-55** is a small flexible antenna with wideband receive coverage from 118-160, 250-290, 360-390, 420-470 and 820-960 MHz. It can also be can be used for transmit up to 5 watts in these commercial bands: 153 to 157 MHz and 460 to 470 MHz. This black 8.75 inch antenna terminates to a 50 ohm SMA jack.

HT-55 *Order #5440* **$29.95**

ApexRadio 713G-DA



The **Apex Radio 713G-DA** antenna is designed to receive across the frequency range of 70 MHz to 3000 MHz employing a compact discone configuration. The small size and relatively light weight design is ideal for installation in a confined space such as an apartment balcony. This antenna employs a low-loss N connector. It is only 41 inches tall and weighs 2.5 lbs. It comes with two "U" bolts to fasten to your mast (the support mast shown is not included). It comes with a preassembled 32 foot RG-58/A/U coaxial cable with a N plug to connect to the antenna base and a BNC plug for your radio receiver. This antenna can also be used for transmit on 144, 430, 904 and 1200 MHz ham bands (under 50 watts).

Apex 713G-DA *Order #1385* **$139.95**

The **Apex LNA-125** is a low noise, in-line aero band receive (108-136 MHz) 12 dB preamp that slides into the base of the 713G-DA. The supplied Apex DCBT-12 bias tee requires 12 VDC 100 mA.

Apex LNA-125 *Order #5654* **$239.98**

DIAMOND ANTENNA D-3000N

The **Diamond D-3000N** discone antenna receives solid from 25 to 3000 MHz and can be used for transmit on 50, 144, 430, 900 and 1200 MHz ham bands (under 100 watts on 144 up, and 20 watts on 6 m.). This omnidirectional, stainless steel antenna is 67 inches high and attaches to any standard mast (0.98-2.05 inches) with two supplied U-bolts. The mast is not supplied. The D-3000N terminates in a female N jack. Coax cable is not included.

D-3000N *Order #5470* **$119.95**

DIAMOND ANTENNA D220

The **Diamond D220** mini discone antenna receives solid from 100 to 1600 MHz! It can also be used for transmit on 144, 430, 904, 1200 MHz (under 50 watts). This stainless steel antenna is 35.5 inches high (with a 8.5 inch maximum diameter). The mount is *not* supplied. Weight is 1.2 lbs. The D220 terminates to a 50 ohm male UHF [PL259] type connector. This will fit directly into a PO type mount (not supplied), thus making it theoretically appropriate for some mobile applications.

Order #0312 **$103.95**

DIAMOND ANTENNA D-130J/NJ

The **D-130J** super discone antenna is an ultra-wideband omnidirectional antenna that offers solid coverage from 25 to 1300 MHz. This lightweight antenna (2.2 lbs) is made of precision tooled stainless steel. It has an SO-239 jack to accept a PL-259. Cable and mast not supplied.

D-130J *Order #2405* **$101.95**

The **D-130NJ** is the same but with an N jack.

D-130NJ *Order #5156* **$102.95**

DIAMOND ANTENNA RHF40 SRHF40

The **Diamond RHF40** is a strange HT antenna for 2 meters and 440 MHz. The top 13 inches of the antenna is completely flexible ... just like a pipe cleaner. It can be twisted into almost any shape. The total length of the antenna is 16 inches. The RHF40 is also a capable wideband receive antenna for 120/150/300/450/800/900 MHz. BNC base.

List $27.95 *Order #0795* **$24.95**

The **SRHF40** is the same but with an SMA plug.

List $26.95 *Order #4730* **$23.95**

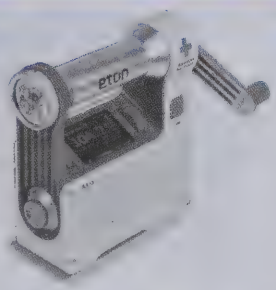
DIAMOND ANTENNA RH77CA SRH77CA

The **Diamond RH77CA** is a popular 2M/440 transceive HT antenna. It is also immensely popular with scanner users because it can additionally receive well on: 120, 150, 300, 450, 800 and 900 MHz. This thin, flexible, black antenna is 15 inches and terminates to a 50 ohm BNC. *Order #2368* **$21.95**

The **Diamond SRH77CA** is similar, but terminates to an SMA. *Order #0491* **$23.95**

eton EMPOWERED BY NATURE

AXIS

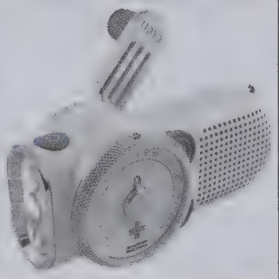


The **Eton Axis** is your one piece emergency solution. This self-powered safety hub gives you AM, FM and NOAA weather, an LED light source and USB cell phone charger. It receives all 7 NOAA weather channels plus Alert. It even has a built-in clock function with alarm. There is a white LED light source *plus* a red LED flashing beacon. This device can be powered via the aluminum crank hand turbine into the supplied internal NiMH battery, or via three AAA cells (not supplied) or external AC adapter (not supplied). There are gasketed jacks for earphones and for auxiliary input. 6.375 x 6.625 x 2.125 inches 1.6 lbs.

AXIS *Order #2372* **$59.98**

eton

ROVER



The **Eton Rover** is a simple, compact and portable information center and light source in any emergency or outing. It features an AM and FM radio plus it receives the NOAA weather stations. Three bright white LEDs lead your way. This self-powered device features a sturdy aluminum crank to recharge the internal lithium-ion battery. This device also has a direct USB power transfer port (USB cable included). It has an earphone jack. 6.25 x 2.75 x 2.25 inches 12.6 ounces.

ROVER *Order #5643* **$34.98**

eton

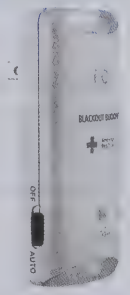
SCORPION

The **Eton Scorpion** is a multipurpose AM, FM, weather radio and LED light. It will meet the needs of the outdoorsman and be a reliable partner during emergency situations. No batteries are needed! It has an integrated USB cell phone charger. It has a rugged exterior skin and is splash proof. It has both a hand dynamo crank and large solar panel. There is even an auxiliary line input jack. The Scorpion has an aluminum carabiner and bottle opener. 5.25 x 2.5 x 1.75 inches 8.5 oz. Available in orange or green.

SCORP ORG *Order #0504* **$49.95**
SCORP GRN *Order #0505* **$49.95**

eton EMPOWERED BY NATURE

ARCBB



The **Eton ARCBB** *Blackout Buddy* is your standby sentinel in the event of a power outage. Leave it plugged in to serve as a nightlight until the power goes off and then it becomes a powerful 3 element LED flashlight. It features a flip-out AC plug making it great for travel too. Charging time is 3 hours, and flashlight time is 2 hours. 2 x 3.95 x 0.75 inches 2 oz.

ARCBB *Order #0347* **$14.95**

eton

ROAD TORQ

The **Eton Road Torq** is a durable, self-powered dynamo hand cranked emergency light with built-in Li-ion battery. It folds for convenient storage in your car and features 3 red LEDs and a bright 1W LED spotlight. Crank 2 minutes for 15 minutes of light. Also has 5V DC power input. With car cigar adapter. If you ever have to change a tire at night, you will be glad to have your Road Torq. Even the legs are reflective! 2.5 x 7.125 x 2.5 inches 14 oz.

Road Torq *Order #2683* **$28.98**

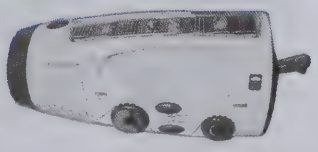
SunStar

SUNTAP SPLASH

The **SunTap Splash** charges even from indoor light or hook it up to your cigarette lighter, or pop in two AA cells. The waterproof SunTap Splash is a flashlight *and* an FM auto-scan radio. It even has a siren and red LED flashers for emergencies and comes with a bike clip. 2.75 x 2.75 x 6.5 inches.

Suntap Splash Blue *Order #4509* **$19.98**
Suntap Splash Yellow *Order #2404* **$19.98**

SUNBURST COMBO

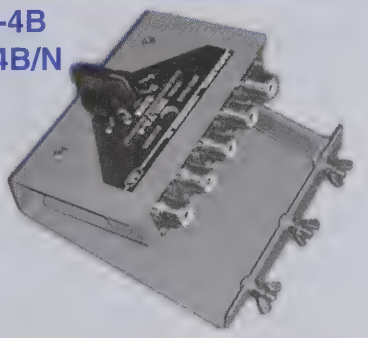


This **Sunburst Combo** is an AM/FM radio and flashlight powered by solar cells or a hand cranked dynamo that recharges the internal cells. Plus it may also be powered from ordinary AA cells or AC adapter (both optional). Yellow all weather case. With siren function and earphone jack.

Sunburst *Order #3783* **$19.98**

ALPHA DELTA

ASC-4B
ASC-4B/N



The **Alpha Delta ASC-4B** is a precision four position antenna switch employing the latest high-tech design. Cast aluminum constant impedance cavities maintain a constant 50 ohm impedance. These switches are rated at 2000 watts PEP. Silver-plated phosphor bronze micro strip construction ensures loss of less than 0.1 dB at 30 MHz with greater than 60 dB of isolation (0.5 dB loss and 50 dB isolation at 450 MHz). These switch consoles will sit right next to your equipment on your desk without having to be secured or bolted down. The switches are positioned in the housing at a 20 degree angle from the horizontal to provide an effective viewing angle and minimize or prevent the cables and hand pressure from moving the console. The Delta switches offer three levels of surge protection! In the common position the radio is disconnected from all antennas and all antennas are connected to ground. A replaceable D-4 Arc-Plug cartridge will divert harmful surges to ground. The Delta switches reduce the hazard of lightning induced surges, but will not prevent fire or damage caused by a direct strike. Made in the U.S.A. The ASC-4B/N switch is the same except with 'N' jacks instead of SO-239s.

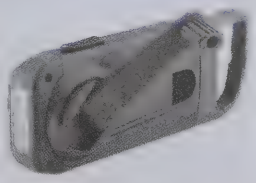
Alpha Delta ASC-4B Four Position Console
Order #1918 ..... **$139.95**

Alpha Delta ASC-4B/N Four Position Console
Order #1217 ..... **$144.95**

Alpha Delta D-4 Arc-Plug Replacement Pill
Order #0854 ..... **$8.95**

eton

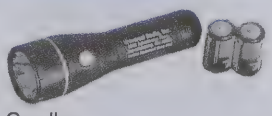
CLIPRAY



The **Eton Clipray** is a wind-up, self powered LED flashlight that also has a USB charging jack for cell phones. It features a hands-free carabiner clip. 6 x 2.25 x 1.25" Red.

Clipray *Order #0166* **$14.95**

UNIVERSAL FLASHLIGHT

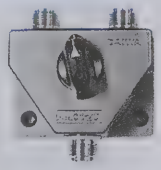


The basic Universal Radio flashlight is black and features a snap-out carry ring. With two C cells.

UR Flashlight *Order #4099* **$3.49**

DAIWA

CS-201A CS-201GII



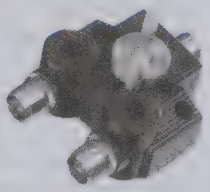
Daiwa switches utilize professionally engineered all metal cavity construction for maximum efficiency, high isolation and minimum resistance. Isolation is better than 50 dB at 300 MHz. Insertion loss <0.2 dB. The CS-201 is a two position switch that utilizes SO-239 connectors. Unused position is grounded. 0 - 600 MHz 2.5 KW PEP 50 ohm.

CS-201A *Order #1864* **$29.95**

As above but utilizes 'N' connectors 0-1300 MHz.
CS-201G II *Order #2224* **$44.95**

DIAMOND

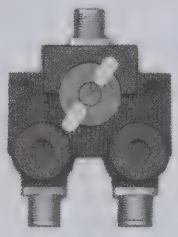
CX-210A



The **Diamond CX-210A** is a very high quality two-position switch (SO-239) for 0-1000 MHz. Insertion loss is <.05 dB at DC-500 MHz and <.1 dB 500-1000 MHz. Maximum power rating is 1500 watts. 50 ohm.

CX-210A *Order #1636* **$44.95**

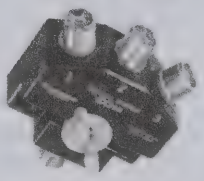
CX-210N



The "N" version of the CX-210 switch is rated to 3000 MHz with only <.1dB at 1000, .15dB at 2000 MHz.

CX-210N
Order #0605 **$71.95**

CX-310A



The **Diamond CX-310A** is a low loss, three position coaxial switch rated to 800 MHz. It can handle up to 1500 watts at HF frequencies. Insertion loss 0-500 MHz is 0.10 dB and at 500-1000 MHz it is 0.15 dB. SO-239 jacks for input and output.

CX-310A *Order #2249* **$79.95**

AMERITRON

RCS4/8/10

Universal carries all three Ameritron remote coax antenna switches. The **RCS4** [shown] **RCS8** and **RCS10** switch 4, 5 and 8 antennas respectively. Some require a control cable (not supplied). Visit our website for details and pricing.

ALPHA DELTA

DELTA SWITCHES

Alpha Delta employs cast aluminum cavities to permit the switching of two or four antennas while maintaining a constant 50 ohm impedance. Silver-plated phosphor bronze micro strip construction ensures loss of less than 0.1 dB at 30 MHz with >60 dB of isolation (0.5 dB loss and 50 dB isolation at 450 MHz). The Delta switches are rated at 1500 watts and offer three levels of surge protection. In the *common* position the common input line is disconnected from all antennas and all antennas are connected to ground. These switches feature a built-in surge protector. A replaceable D-4 Arc-Plug cartridge will divert harmful surges to ground. (Note: The Delta switches reduce the hazard of lightning induced surges, but will not prevent fire or damage caused by a direct strike). The Delta 2B and Delta 4B switches feature SO-239 fittings (for PL-259s).
The **Delta-2BN** and **Delta-4BN** switches are the same except with 'N' jacks instead of SO-239s.

Alpha Delta Delta-2B Two Position Switch
Order #4787 ..... **$56.95**

Alpha Delta Delta-2BN Two Position Switch
Order #4788 ..... **$74.95**

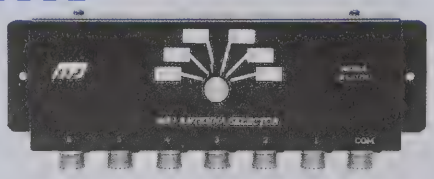
Alpha Delta Delta-4B Four Position Switch
Order #4789 ..... **$84.95**

Alpha Delta Delta-4BN Four Position Switch
Order #4790 ..... **$94.95**

Alpha Delta D-4 Arc-Plug Replacement Pill
Order #0854 ..... **$8.95**

MFJ

MFJ-1701 MFJ-1706



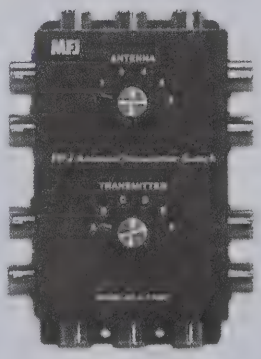
The **MFJ-1701** allows you to switch between six antennas and can be used for 52 to 75 ohm systems. It uses seven SO-239 connectors. All unused terminals are automatically grounded for static-lightning protection. With mounting holes. Can be used for transmitting up to 2000 watts SSB or 1000 watts CW. Black aluminum. 10 x 3 x 1.5".

MFJ-1701 *Order #1083* **$69.95**

The **MFJ-1706** 6 pos. balanced antenna switch features 5-way binding posts instead of SO-239s.

MFJ-1706 *Order #2268* **$99.95**

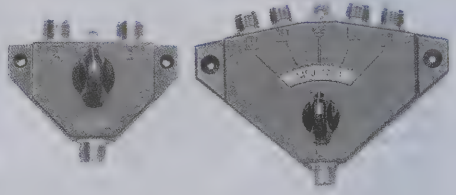
MFJ-1700C



If you have multiple antennas *and* multiple radios, the **MFJ-1700C** is just for you! It can handle up to six radios and six antennas. With mounting holes for desk or wall. May be used for transmitting up to 2000 watts single sideband or 1000 watts CW at 50 to 75 ohms. SO-239 jacks. Built-in surge protection. Black 4.5 x 7 x 3 inches.

MFJ-1700C *Order #0212* **$99.95**

MFJ-1702C MFJ-1704



The **MFJ-1702C** two-position coax switch has a center ground position and the unused terminal is automatically grounded for static and RF protection. Handles up to 2.5 KW PEP 1 KW CW. 0-500 MHz. Now includes surge protection. 50 ohm. SO-239. Blue-green color.

MFJ-1702C *Order #2811* **$36.95**

As above but with "N" connectors (no surge prot.)
MFJ-1702CN *Order #1192* **$41.95**

The **MFJ-1704** switch selects up to four antennas or center ground position. It also features static surge suppression with a replaceable arrestor. It handles up to 2.5 KW PEP 1 KW CW. 0-500 MHz. Isolation is rated from >60 dB at 30 MHz to >50 dB at 500 MHz. 50 ohm. SO-239. Blue color.

MFJ-1704 *Order #0362* **$74.95**

As above, but with "N" type connectors.
MFJ-1704N *Order #2494* **$79.95**

Philmore

30-9730

Remember these? The **Philmore 30-9730** DPDT knife switch is still a cheap and easy way to disconnect a wire receiving antenna from a radio. The terminal and contact material is nickel plated steel. The base is black ABS plastic. Current rating: 0.3 amps 50 VAC or 0.5 amps 6 VDC. The base is 2.4 x 1.7 inches.

30-9730 *Order #1432* **$3.95**

▶ Since no single antenna works best on all frequencies, many listeners use more than one antenna. The antenna switch is a critical component of the listening system since it is switching very small current. A poorly designed or poorly constructed switch can introduce enough resistance to substantially attenuate the signal coming in from your antenna. Do not jeopardize your entire listening system with a poor antenna switch.

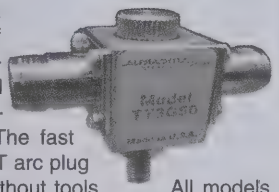
ALPHA DELTA LT

Today's receivers utilize solid-state components and have very sensitive front ends. These radios are much more susceptible to lightning and static problems than their tube-type predecessors. Unlike the old "air-gap" lightning arrestors, the Transi-Trap utilizes a hermetically sealed gas filled cylinder which has very reliable, predictable and fast switching characteristics (less than 100 nanoseconds!). The Transi-Trap directs the discharged current to an isolated ground terminal versus the coaxial ground system and has a replaceable plug. The LT is for receive and transmit up to 200 watts under 30 MHz. The LT and other protectors must be connected to a proper earth ground.

Transitrap LT *Order #1502* **$29.95**

Replacement cartridge for the LT.
Pill for LT *Order #1503* **$16.95**

ATT3G50



The **Alpha Delta ATT3G50** series of coax surge protectors offer wideband capability with extremely low loss. The fast acting gas tube ATT arc plug can be replaced without tools. All models are completely weather proofed by the use of O-ring seals and all hardware is stainless steel. Made in America.

The **ATT3G50** "N" version, shown above, can be used from DC to 3 GHz with typical loss of only 0.1 dB @ 1 GHz and 0.2 dB at 2 GHz. It can be used for receive or for transmit (up to 200 watts).
ATT3G50 (N) *Order #4003* **$54.95**

The **ATT3G50U** version features UHF female jacks (SO-239's) and can be used for receive or transmit (up to 200 watts) from 0 to 500 MHz.
ATT3G50U *Order #4004* **$47.95**

The **ATT3G50UHP** is a high power transmit version of the ATT3G50U and can handle up to 2 kW.
ATT3G50UHP *Order #4005* **$47.95**

The **ATT3G50HP** is a high power transmit version of the ATT3G50 (N) and can handle up to 2 kW.
ATT3G50HP *Order #4008* **$54.95**

Replacement cartridge for ATT3G50 & U.
3G50 *Order #4006* **$9.95**

Replacement cartridge for ATT3G50HP & UHP.
3G50HP *Order #4009* **$10.95**

The **ATT3G50UBXL** is a bulkhead (up to 1.5 inches) unit for 0-500 MHz, up to 200 watts.
ATT3G50UBXL *Order #2794* **$58.95**

DEO

RG2000U

RG2000CTT

Lightning and static are not the only enemies of modern receivers! Sensitive receiver "front-ends" can also be damaged by nearby high power radio signals (RF). The ham across the street running 2000 watts into a beam antenna can generate enough RF in your antenna system to damage or desensitize your receiver. Other potential sources of high power RF are high powered CB operators, commercial radio and TV broadcasters and public service broadcasters. Hams who have separate receivers are also very susceptible to this problem. Design Electronics Ohio has developed a series of diode-activated switching devices which will switch your antenna automatically to ground in the presence of a high-power RF field. It uses a fast acting diode switching circuit with very low insertion loss. These devices do not change the performance of the set and do not offer lightning suppression (except CTT). Not for use with transceivers or transmitters! Uses standard SO-239 connectors (mates with PL-259s). Made in U.S.A.

RG 2000U *Order #1305* **$38.98**

The **Receiver Guard RG2000 CTT** model combines the model "U" version with an Alpha Delta LT Transi-Trap device to offer ***both*** RF protection and lightning suppression. Shown above-right.

RG 2000CTT *Order #1303* **$64.98**

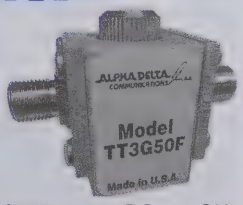
OPEK Opek A7516

The **Opek A7516** surge arrestor is not the *state-of-the-art* in radio protection. These *air gap* arrestors were OK for tube sets, but are not the best for today's solid-state rigs. However, if you are on a budget, this device is a whole lot better than nothing! For receive and transmit up to 100W.

A7516 *Order #4618* **$3.95**

ALPHA DELTA

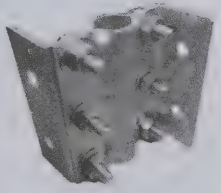
ATT3G50F



The **Alpha Delta ATT3G50F** covers DC to 3 GHz with up to 200 watts. It features female "F" connectors for input and output. Also a great choice for high quality protection of FM, TV and scanner antennas that may use F connectors.

ATT3G50F *Order #1805* **$58.95**

UCGC

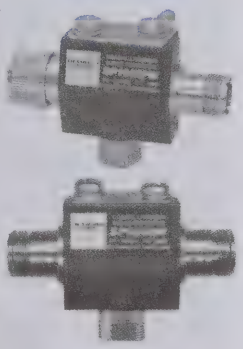


The **Alpha Delta UCGC** is a special copper grounding clamp. It allows for the direct attachment of ATT/TT3G50 series surge protectors to your 5/8" ground rod.

UCGC *Order #5808* **$49.95**

The new **Alpha Delta GBWM** ground bus holds up to four ATT type surge protectors.
GBWM *Order #6170* **$69.95**

DIAMOND SP1000 SP3000



The **Diamond SP** surge protectors offer wideband capability with extremely low loss and impulse wave discharge capacity of 6000 Amps. Insulating resistance DC 100 V is over 10,000M ohms. The **Diamond SP1000** series is a favorite for HF through 2 meters. The SP1000PW (shown top) is waterproof. The **Diamond SP3000W** (shown lower) is capable for up to UHF and above and is waterproof. Select the version of this device depending on connector types, frequency and power capacity. For transceive *or* receive-only use.

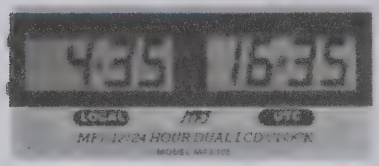
Order	Model	MHz	Watts	I/O	Price
#2313	**SP1000**	0-1000	400	SO239-SO239	**$26.95**
#6169	**SP1000PW**	0-1000	400	SO239-PL259	**33.95**
#5346	**SP3000W**	0-3000	200	N Fem-Fem	**39.95**
#2357	**SP3000P**	0-3000	200	N Fem-Male	**40.95**

MFJ-1164B

The **MFJ-1164B** reduces AC power line RFI, noise, transients, surges generated by computers, motors, RF transmitters, static/lightning by 30 dB and up to 60-80 dB with good earth ground. It provides inductive isolation, capacitive decoupling, RFI rejection, over-voltage protection. MFJ-1164B has four 3-wire, 15 Amp, 120 VAC outlets that are spaced for large adapters. 25 Amps/3000 Watts max. Aluminum case 12 x 3½ x 2 inches.

MFJ-1164B *Order #4743* **$74.95**

MFJ-107B
MFJ-108B



The **MFJ-107B** LCD clock features bold 5/8" inch numerals that display hour and minutes. 2 x 1 x 2 inches. The MFJ-108B features a *dual* display for both 24 hour UTC and 12 hour local time. 4 x 1 x 2 inches. Battery included with both models.

MFJ-107B *Order #0895* **$12.95**
MFJ-108B *Order #0990* **$21.95**

MFJ-112B

The **MFJ-112B** DXer's 12/24 hour world map-clock not only shows you the time throughout the world, but it also indicates day-of-week, month, date and year. Push buttons let you move the display to any time zone on the world map. There is even a language display option for the day-of-the-week indication. It may be set for English, French, Spanish, German or Italian. Gray plastic case. With 24 hour alarm. This clock has a cool blue backlight feature for night viewing. It stays on for four seconds. 4.5 x 3.375 x 2.25 inches. Requires two AAA cells (not included).

MFJ-112B *Order #1921* **$26.95**

MFJ-123B

The **MFJ-123B** solar powered *Eternity Atomic Clock* never needs batteries and you never need to set time! Ordinary room light powers the clock and replenishes the built-in rechargeable battery to run the clock in-the-dark. The whopping LCD display is 3.5 inches tall and 6.25 inches wide. Choose 24 or 12 hour time format. Has a huge running seconds display. The digital calendar mode gives you the day of the week, month, date, and year. Hang it on your wall or set it on your desk and forget it. 9 x 6.25 inches. Super attractive metallic silver fits in any decor.

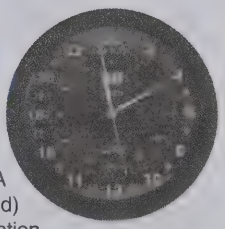
MFJ-123B *Order #4970* **$59.95**

MFJ-186RC

The **MFJ-186RC** radio-controlled wrist watch has 12 or 24 hour format and can be set to Pacific, Mountain, Central, or Eastern. It has running seconds, day-of-week and date display. It is water-resistant and has alarm and stop watch functions. Year, month, and day can be displayed in calendar mode. With battery. The MFJ-186RC is black.

MFJ-186RC *Order #2439* **$19.95**

MFJ-105D



The ten inch **MFJ-105D** 24 hour wall clock provides excellent visibility, even from across the room. A single AA cell (not included) provides one year of operation.

MFJ-105D *Order #5739* **$24.95**

MFJ-113

The **MFJ-113** economy LED clock-alarm has a four digit 1.8" red LED display that can be set for 12 or 24 hour format. Also has a 9 minute snooze function. A 9 volt battery (not included) provides backup. 110 VAC 60 Hz. Black 9 x 3.8 x 2.5".

MFJ-113 *Order #4262* **$19.95**

MFJ-122RC

The **MFJ-122RC** atomic clock features: 24/12 switchable format, seconds display, date/day, snooze/timer, cool blue backlight and selectable DST. It is white with a snooze/light bar switch at the top. Like all the atomic clocks we offer, it is designed for use only in the U.S.A., as these devices stay accurate by automatically synchronizing with the WWVB 60 kHz time station in Boulder, Colorado. It also displays indoor temperature (32 to 122°F). 3.5 x 4 x 1.6 inches. Requires two AAA cells (not included).

MFJ-122RC *Order #6319* **$12.95**

MFJ-117

The huge **MFJ-117** LED clock is over 11 inches wide. The 2.5 inch LED display can be set for 12 or 24 hour format and comes with an AC adapter. Can be set on a desk or hung. A 9 volt battery (not supplied) provides backup power.

MFJ-117 *Order #4267* **$37.95**

MFJ-121B

The **MFJ-121B** atomic clock lets you simultaneously read UTC *and* local time. Huge 2 inch tall by 1½ wide LCD numerals with seconds display. Set either for 12 or 24 hour format. Automatic backlight operates daily at your preset time for 8 hours. Requires two AAA's (not supplied). Has D.S.T. disable.

MFJ-121B *Order #4969* **$74.95**

MFJ-133RC

The **MFJ-133RC** backlit LCD clock can display two time zones in 24 or 12 hour format. The main display can be set for any USA time zone. The second display can be set for any time zone including UTC. Atomic - WWVB for absolute accuracy! Huge 1 1/8 inch high-contrast LCD numerals with alarm and snooze function. Only 4 x 3 x ¾ inches. Requires two AAA cells (not included).

MFJ-133RC *Order #0237* **$32.95**

- In order to avoid the confusion of many time zones, hams, military, marine and international broadcasters always refer to time at the zero meridian which runs through Greenwich, England. This time zone is five hours ahead of Eastern Standard Time (4 hours ahead of Eastern Daylight Time). This 24 hour format may also be called Coordinated Universal Time (UTC) or GMT. For example 4:00 PM EST = 21:00 or 4:00 P.M. EDT = 20:00 UTC.
- Shortwave listeners can hear ultra accurate time signals by tuning station WWV in Boulder, Colorado at 2500, 5000, 10000, 15000 or 20000 kHz. Canadian listeners should try for CHU Ottawa on 3330, 7850 or 14670 kHz.

MFJ-136RC

The **MFJ-136RC** is a solar-powered, 12/24 hour desktop clock that never needs batteries! It features a large LCD display (1 5/8" x 2 ¼") and gives precision radio-controlled time synchronized from government station WWVB in Boulder, Colorado plus shows the date. Press the snooze button to backlight the LCD (for 4 seconds). It also features an alarm with 5 minute snooze function. With auto D.S.T. 3 x 4.5 x 1.5 inches. List $29.95.

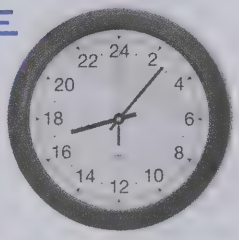
MFJ-136RC *Order #4972* **$27.95**

MFJ-139RC

The **MFJ-139RC** 12/24 hour clock boasts giant 4 inch digits. It has 8 time zones including Hawaii and Puerto Rico plus it supports GMT (UTC)! Daylight savings time can be turned on or off. It is solar powered so you never need batteries. Besides time, it also displays the month, date and day of the week. Plus it has an indoor thermometer and hygrometer. Can be placed on a desk or hung on the wall. 15.75 x 10.75 x 0.75". List $99.95.

MFJ-139RC *Order #6076* **$89.95**

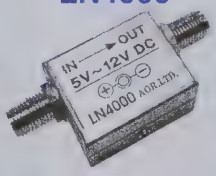
C.CRANE 24HC



The **Crane 24HC** 12.2 inch, 24 hour wall clocks are used by governments, hospitals, aviation, radio stations, police departments, the military, shipping companies, shortwave listeners and ham radio operators around the world. Just add one AA battery (not included) to make it tick.

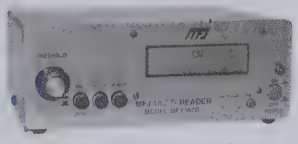
24HC *Order #2520* **$19.95**

AOR LN4000



The **AOR LN4000** low noise receive amplifier operates from 100 to 3000 MHz providing 20 dB gain (typical). The LN4000 is ideal as a preamp for a frequency counter or spectrum analyzer. Input and output jacks are SMA. Requires 5 ~ 12 VDC at 26 mA. Comes with two BNC to SMA adapters, SMA to SMA 8 inch coaxial cable and DC power cable. It is for receive only! 1 x 0.5 x 0.84 inches 0.54 oz. List $229.00 *Order #1055* **$209.95**

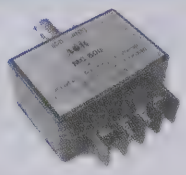
MFJ-462B



The **MFJ-462B** ***MultiReader™*** is a stand-alone multimode reader that is driven by audio from your shortwave receiver or transceiver. It will can decode and display Morse code, Baudot RTTY (45, 50, 57, 75 and 100 baud), ASCII (110 baud) and AMTOR FEC. The text messages will scroll across the LCD display. No PC is needed. RTTY shifts include 170, 425 and 850 Hz. This device has an 8000 character volatile RAM buffer. The rear panel has input for a 12 VDC power supply (MFJ-1312D) and an Epson compatible parallel printer port (neither included).

MFJ-462B *Order #5513* **$189.95**

AOR MC-600



Many classic receivers from the Golden Age such as Hallicrafters, Hammarlund, National and Eddystone do not feature a 50 ohm coax input jack. The **AOR MC-600** allows an efficient connection of your coax fed antenna to these receivers. This impedance matching transformer is designed to work from 10 kHz to 30 MHz with less than 3 dB insertion loss. Input is 50 ohm BNC female. Output is 600 ohm balanced terminals. A short twin-lead jumper cable is supplied.

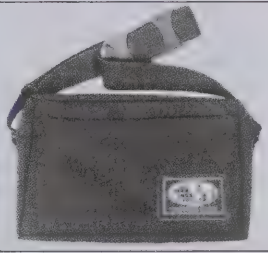
MC-600 *Order #3335* **$88.95**

GO BAGS

These insulated bags are great for creating an *Emergency Go Bag* for your radio. They are the perfect size for scanners and small shortwave portables. There is plenty of room for your radio, batteries, accessories, *World Radio TV Handbook* and more. The top is zippered and it has a carry strap plus an open pocket on the front panel. 8 x 6 x 5 inches.

Icom Logo - Blue	*Order #5832*	**$9.95**
Kenwood Logo - Green	*Order #5662*	**$9.95**
Yaesu Logo - Orange	*Order #5883*	**$7.95**
Universal Logo - Blue	*Order #5733*	**$7.95**

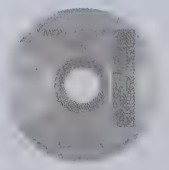
CASE



This padded canvas carrying case is 12 x 8 x 4 inches. It is fully described on page 105.

#0395 **$29.95**

Klingenfuss RTTY MODE CD



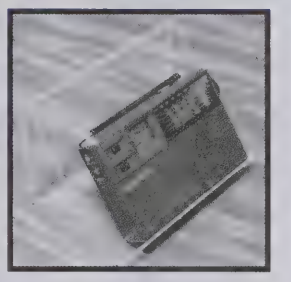
Noted author Joerg Klingenfuss has produced an audio CD set of 71 emission types. This 2½ hour, **two audio CD set** allows rapid access to the typical sound of all conventional and exotic shortwave transmission modes. Connect your audio CD player to your teletype decoder to practice tuning these modes. Synchronization is perfect as a result of digital recording techniques. **Part 1.**

Order #0220 **$69.95**

The new **Part 2** contains 120 new recordings, again on two audio CDs.

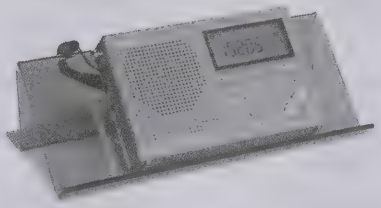
Order #0035 **$69.95**

RADIO STANDS



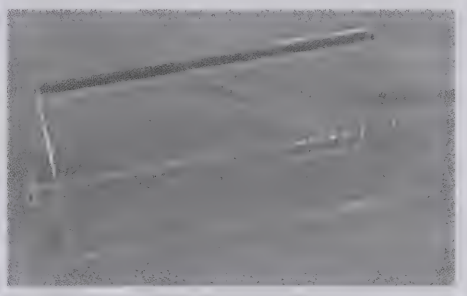
These handy clear plastic stand supports your portable shortwave at the optimum viewing angle. (The radios shown are not included). Size: 6.75 x 4.5 x 4.75 inches (5.2 inches on the slant).

CLEAR MED *Order #0022* **$8.95**



Translucent blue mini-stand for small portable radios (KA11/105, SWP). 7" wide, 3" on the slant.

BLUE MINI *Order #4270* **$6.98**



This clear radio stand holds the E1 and other larger portable radios at an optimum viewing and operating angle. It is 12 inches wide.

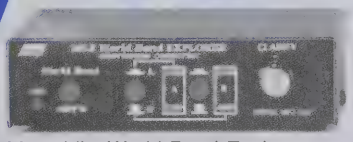
CLEAR LRG *Order #3873* **$18.95**

ANNIVERSARY MUG

This striking midnight blue mug features the Universal Radio logo and *70th Anniversary* notation in metallic gold paint. Holds 11 ounces.

Mug 70th *Order #5853* **$9.95**

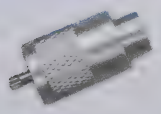
MFJ-306



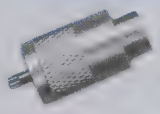
The **MFJ-306** mobile *World Band Explorer* converts your car radio into a shortwave radio at the push of a button. You will be able to monitor the 19, 25, 31 and 49 meter bands. Just unplug your car radio antenna, and plug it into the MFJ-306. Then insert the MFJ-306 cable into your car radio antenna jack and connect 12 VDC. Please note the actual shortwave frequencies will *not* be displayed. Just 5 x 1.5 x 3.5 inches. List $109.95.

MFJ-306 *Order #1328* **$97.98**

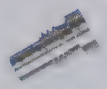
RF CONNECTORS



PL-259
Silver plated, silver plated tip and teflon.
Order #2111...$**2.19**

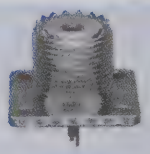


PL-259 SGT
Silver plated, gold plated tip and teflon.
Order #2973...$**2.79**



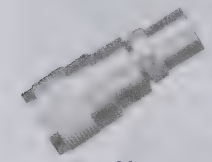
UG-175
PL-259/N reducer for RG58. Silver plate.
Order #2117...$**0.69**

UG-176
PL-259/N reducer for RG59/8X. Silver plate.
Order #2115...$**0.69**



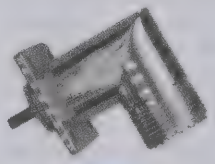
SO239
SO-239 chassis connector (4 hole).
Order #1426...$**1.99**

SO239 SNGL
SO-239 chassis connector (1 hole).
Order #1903...$**2.09**

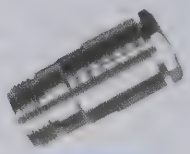


N
N male 2-part. Silver plate, gold tip, teflon accepts UG-175/176.
Order #1273...$**4.95**

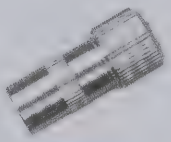
N CHASSIS
N female chassis connector (4 hole).
Order #3379 $**4.95**



RAC
SO-239 right angle chassis (4 hole).
Order #5048...$**4.49**

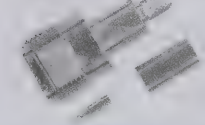


N FEM 8
N inline female for RG8U/213, 9913.
Order #1852...$**4.95**

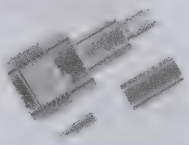


KOK1
Female PAL (fits some Grundig radios).
Order #0199...$**4.95**

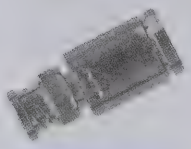
SMA CHASS
SMA chassis connector (2 hole).
Order #5027...$**2.59**



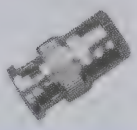
UHF IL 8X
Crimp inline SO-239 for RG-8X.
Order #5102...$**2.19**



UHF IL 58U
Crimp inline SO-239 for RG-58U.
Order #5101...$**2.29**



BNC MALE 8
Male BNC for RG-8/213, 3 part solder.
Order #4702...$**3.95**



BNC MALE 59
Male BNC for RG-59, 3 part solder.
Order #5038...$**4.49**

MOTO PLUG
Motorola type antenna plug.
Order #0305...$**0.79**

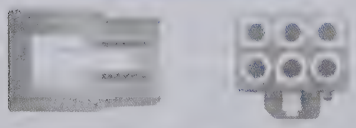
BNC FEM CH
BNC chassis connector (4 hole).
Order #2812...$**2.89**

DIN PLUGS & INLINE JACKS

Order#	Model	DIN Description	Price
#2697	DIN 2PIN	2 Pin plug	$1.59
#0566	DIN 3PIN	3 Pin plug	2.59
#2361	INL DIN3J	3 Pin inline jack	2.79
#4078	DIN 4PIN	4 Pin plug	2.99
#1828	DIN 5PIN	5 Pin plug 180°	2.99
#2266	INL DIN5J	5 Pin inline jack180°	2.89
#2701	DIN 6PIN	6 Pin plug	2.99
#2870	INL DIN6J	6 Pin inline jack	3.09
#1395	DIN 8PIN	8 Pin plug 270°	3.29
#2331	INL DIN8J	8 Pin inline jack 270°	3.89
#2089	DIN 8KEN	8 Pin plug 262°	8.99
#0954	DIN 13KEN	13 Pin plug	4.99
#3046	MIN DIN4P	4 Pin Mini plug	1.89
#3305	MIN DIN6P	6 Pin Mini plug	1.99
#3573	MIN DIN6F	6 Pin Mini chassis jack	1.69
#0161	MIN DIN8P	8 Pin Mini plug	2.49
#3345	MIN DIN8F	8 Pin Mini chassis jack	1.89

Item *#1395* is shown above.

MOLEX PLUG



Common MOLEX DC power plug as used by Icom, Kenwood, etc. With four pins.
DC PLUG *Order #5368* $**1.59**

MIC PLUGS & JACKS

Order#	Model	Description	Price
#1874	MIC 2 PIN	2 Pin plug	$3.99
#2793	2PIN MICJ	2 Pin chassis jack	2.99
#1892	MIC 3 PIN	3 Pin plug	3.69
#1155	3PIN MICJ	3 Pin chassis jack	2.89
#2400	MIC 4 PIN	4 Pin plug	2.99
#2398	4PIN MICJ	4 Pin chassis jack	2.89
#5082	INLINE 4P	4 Pin inline jack	7.99
#2401	MIC 5 PIN	5 Pin plug	2.99
#2977	5PIN MICJ	5 Pin chassis jack	3.39
#4344	INLINE 5P	5 Pin inline jack	6.99
#1919	MIC 6 PIN	6 Pin plug	3.79
#1834	6PIN MICJ	6 Pin chassis jack	3.99
#2112	MIC 8 PIN	8 Pin plug	3.99
#2399	8PIN MICJ	8 Pin chassis jack	4.19
#0526	INLINE 8P	8 Pin inline jack	7.99

DC PLUGS

Item *#4354* shown

Order#	Model	In/Out Diameter/Length	Price
#0910	204	1.3/3.5mm 1 inch	$0.99
#0821	210	2.1/5.5mm 1 inch	0.99
#2961	210L	2.1/5.5mm 1.45 inch	0.99
#4351	235	0.7/2.35mm	2.39
#4352	240	1.7/4.0mm	2.09
#0963	250	2.5/5.5mm	0.99
#4354	255	3.3/5.5mm +1mm pin	2.69
#4353	275	1.75/4.75mm	1.99
#5748	208	3.0/6.3mm	1.99

300-40

Are you tired of having every interseries adapter, except the one you need? Then consider the **300-40** 40 piece RF adapter kit. It contains two each of: BNC Female, BNC Male, TNC Female, TNC Male, N Female, N Male, UHF Female, UHF Male, Mini UHF Female, Mini UHF Male, SMA Female, SMA Male, F Female, F Male, RCA Female, RCA Male and 8 Pieces Universal Adapter. This is every interseries adapter you are likely to need. And they are gold plated, gold contacts and have Teflon insulation. You simply screw the two desired ends to the universal adapter to configure your adapter. It comes complete in a padded, soft, zippered carrying case (7.5 x 2 x 5 inches).
300-40 *Order #3613* $**189.95**

The **300-30** kit is similar, but with 30 pieces.
300-30 *Order #3666* $**99.95**

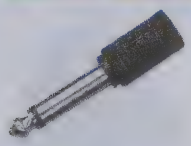
INLINE DC JACKS

Order#	Model	In/Out Dia.	Mates	Price
#4915	256	1.3/3.5mm	#0910	$1.59
#4774	257	2.1/5.5mm	#0821 #2961	1.69
#4775	258	2.5/5.5mm	#0963	1.79

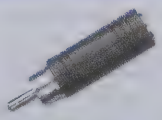
Item *#4774* shown above.

For additional connectors and adapters please visit: www.universal-radio.com

AUDIO ADAPTERS



MINI-1/4 M
Mini 1/8 inch mono female to 1/4" male.
Order #1434...$**1.99**

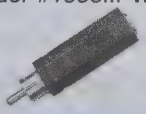


MINI-RCA
Mini 1/8 inch (3.5 mm) mono female to RCA.
Order #1428...$**1.99**

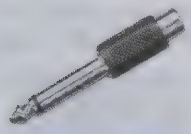
RCA-MINI
Female RCA to mini 2 conductor male.
Order #1558...$**1.99**

RCA-RCA
RCA female to RCA female coupler.
Order #0729...$**0.49**

RCA-RCA GL
RCA female to RCA female coupler. Gold.
Order #1054...$**0.99**



1/4M-RCA
1/4 inch mono female to RCA male.
Order #1427...$**1.99**



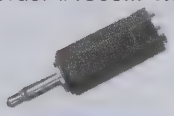
RCA-1/4 2C
RCA female to 1/4 inch mono male plug.
Order #1418...$**1.69**

MINI-1/4 S
1/8" stereo female to 1/4" stereo male.
Order #1118...$**1.89**

540A
1/4" mono female to 1/8" mono male.
Order #1563...$**1.99**

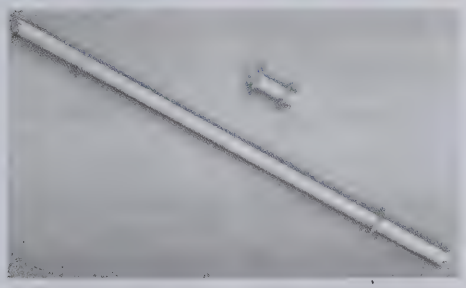
2.5S-3.5S
1/8" stereo female to submini stereo male.
Order #4526...$**2.69**

3.5S-2.5S
Submini stereo female to 1/8" stereo male.
Order #4525...$**1.99**



3.5M-2.5M
Submini mono female to 1/8" stereo male.
Order #1886...$**1.29**

UG-363 BULKHEAD ADAPTERS



How do I get my antenna feedline into the house? Yes, the age old question. One simple answer is drill a 5/8 inch hole through the wall and use a UG-363 bulkhead adapter of the appropriate length. This useful female to female adapter will accept a PL-259 plug at both ends. Available in 8 lengths. The 1 inch and 12 inch models are shown above.

Order#	Model	Length of Adapter	Price
#3683	UG363- 1	1 Inch	$2.99
#2795	UG363- 2	2 Inches	3.99
#3688	UG363- 3	3 Inches	4.99
#3707	UG363- 4	4 Inches	5.99
#3710	UG363- 6	6 Inches	9.99
#3713	UG363- 8	8 Inches	12.95
#3717	UG363-10	10 Inches	15.95
#3734	UG363-12	12 Inches	18.95

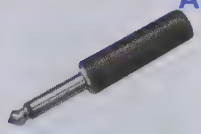
ACY8 ACY9

The **ACY9** allows you to feed two sets of mono headphones, or earphones from one sound source such as a scanner (shown).
ACY9 *#0508* $**3.49**

The **ACY8** is the same, but for stereo sources.
ACY8 *#4648* $**2.99**

RCA CHASS
RCA phono jack chassis mount.
Order #2390...$**0.69**

AUDIO CONNECTORS

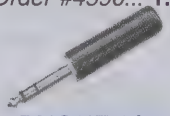


PHONE 1/4M
Phone plug 1/4 inch 2 conductor. Black.
Order #1855...$**1.49**

RED 1/4M
Phone plug 1/4 inch 2 conductor. Red.
Order #4590...$**1.49**

SHLD 1/4M
Phone plug 1/4 inch 2 conductor. Metal.
Order #3042...$**1.79**

PHONE 1/4S
Phone plug 1/4 inch 3 conductor. Black.
Order #0878...$**1.59**



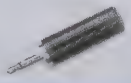
PHONE 3/16
Drake/Collins mic plug 3/16 inch. 3C.
Order #2888...$**3.99**

2288C
Stereo 1/4 inch panel jack. 3C.
Order #2033...$**2.99**

MINI MONO
Mini plug 1/8 inch 2 conductor. Black.
Order #0707...$**0.89**

MINI M SHL
Mini plug 1/8 inch 2 conductor. Metal.
Order #1949...$**0.99**

MINI STERO
Mini plug 1/8 inch 3 conductor. Black.
Order #2310...$**0.99**

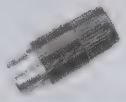


SUBMINI MO
Submini plug 3/32 inch 2 cond. Black.
Order #1947...$**1.59**

SUBMINI ST
Submini plug 3/32 inch 3 cond. Black.
Order #2835...$**1.89**

PHONO RCA
Shielded, metal phono RCA plug.
Order #2389...$**0.99**

BANANA
Banana plug black.
Order #1425...$**0.79**
Banana plug red.
Order #1017...$**0.79**



RCA FEMALE
Inline RCA phono jack. Plastic.
Order #4343...$**0.69**

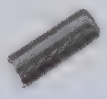
RCA INLINE
Inline RCA phono jack. Metal shielded.
Order #2304...$**0.89**

INL 3.5 3C
Inline jack 1/8 inch 3 conductor. Black.
Order #0257...$**1.19**

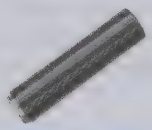
INL 3.5 2C
Inline jack 1/8 inch 2 conductor. Black.
Order #4306...$**1.09**

INL 1/4 2C
Inline jack 1/4 inch 2 conductor. Black.
Order #5052...$**1.19**

INL 2.5 2C
Inline jack 3/32 inch 2 conductor. Black.
Order #0155...$**0.89**



INL 2.5 3C
Inline jack 3/32 inch 3 conductor. Black.
Order #2913...$**1.19**



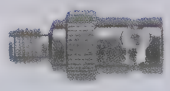
INL 1/4 3C
Inline jack 1/4 inch 3 conductor. Black.
Order #5053...$**1.29**

LEGEND: Submini = 3/32 inche = 2.5 mm
Mini = 1/8 inch = 3. mm
1/4 inch = 6.3 mm
Monaural = 2C
Stereo = 3C

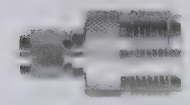
SMA ADAPTERS

SMF-BNF BK
SMA female to BNC female - Black.
Order #3164...$**5.99**

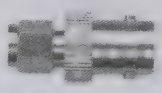
SMA F - SO239
SMA female to SO-239 adapter.
Order #0856...$**4.69**



SMA F - BNC F
SMA female to BNC female adapter.
Order #5752...$**3.95**



SMA M - SO239
SMA male to SO-239 (UHF) adapter.
Order #2976...$**3.95**

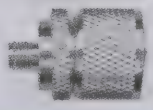


SMA M - BNC F
SMA male to BNC female adapter.
Order #0531...$**4.99**

BNC/SL16
SMA female to BNC female adapter (Wox)
Order #5560...$**5.95**

SMA F - BNC M
SMA female to BNC male adapter.
Order #0853...$**4.49**

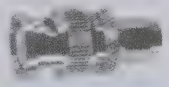
SMA-90°
SMA male to SMA female elbow adapter.
Order #5026...$**3.49**



SMA F - PL259
SMA female to PL259 adapter.
Order #0859...$**4.95**

SMA F - SMA F
SMA female to SMA female barrel adapter.
Order #4304...$**2.19**

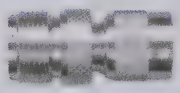
SMA M - SMA M
SMA male to SMA male adapter.
Order #4563...$**2.29**



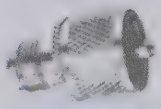
SMA M - BNC M
SMA male to BNC male adapter.
Order #4407...$**4.49**

TNC ADAPTERS

BNC F-TNC M
BNC female to TNC male adapter.
Order #0374...$**3.79**

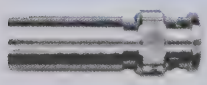


SO239-TNC
SO239 to TNC male adapter.
Order #0283...$**3.69**



TNC-PL259
TNC female to PL259 adapter.
Order #2196...$**3.99**

MOTOROLA ADAPTERS

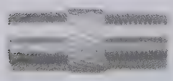


MOTO-BNC
Motorola female to BNC male adapter.
Order #1455...$**3.95**

SO-239-MOTO
SO-239 to Motorola male adapter.
Order #4659...$**2.09**

TNC-SMA
TNC Female to SMA male adapter.
Order #4709...$**3.89**

PAL ADAPTERS



PAL M TO F
PAL male to F female adapter.
Order #1113...$**1.79**

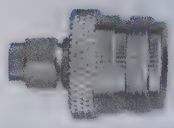
PAL F TO F
PAL female to F female adapter.
Order #1156...$**2.29**

BNCF-PAL M
BNC female to PAL male adapter.
Order #4927...$**2.99**

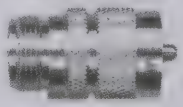
N ADAPTERS

N ELBOW MF
N male to female elbow adapter.
Order #0405...$**6.95**

UG-29
N female to N female barrel adapter.
Order #2760...$**3.95**

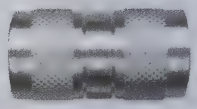


SMA M - N
SMA male to N female adapter.
Order #4401...$**4.19**

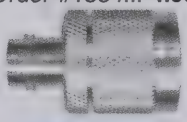


UG-83
N female to PL-259 adapter.
Order #1384...$**4.95**

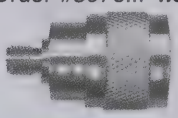
UG-146
SO-239 to N male adapter.
Order #3076...$**4.95**



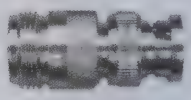
UG-57
N male to N male adapter.
Order #0037...$**4.95**



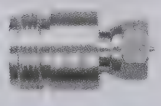
BNC TO N
BNC female to N male adapter.
Order #0931...$**5.99**



SMA TO N
SMA female to N male adapter.
Order #4406...$**4.95**

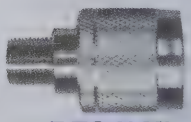


UG-349/AU
N female to BNC male adapter
Order #4571...$**4.95**



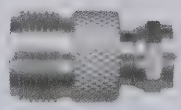
N FEM-F ML
N female to F male adapter.
Order #4576...$**3.95**

UG-30
N female to N female bulkhead adapter.
Order #3355...$**5.95**

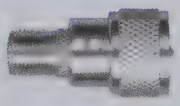


F TO N ML
F female to male N adapter.
Order #4532...$**3.89**

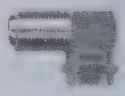
F ADAPTERS



SO239 TO F
SO239 to F male adapter.
Order #2814...$**3.19**

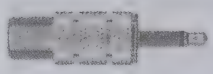


F TO PL259
F female to PL259 adapter.
Order #3111...$**2.99**



F ANGLE
F Male to F Female 90° elbow.
Order #5333...$**0.99**

F M to F M
F Male to F Male adapter.
Order #3665...$**0.99**



F TO MINI
F Female to 1/8" mini plug.
Order #5177...$**2.69**

F to RCA M
F Female to RCA Male adapter.
Order #5179...$**1.89**

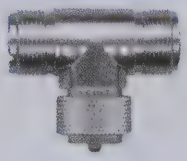
RCA F-F M
RCA female to F male adapter.
Order #4582...$**1.29**

BNCF TO FM
BNC Female to F male adapter.
Order #2942...$**3.09**

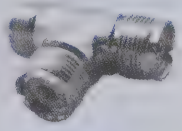
F-81
F female to F female adapter. Gold.
Order #2081...$**1.69**

PL259 (UHF) ADAPTERS

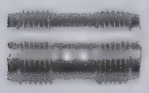
SO2-SMF BK
SMA female to SO-239 - Black.
Order #6021...$**5.99**



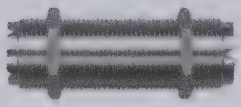
UHF-T
UHF "T" adapter. Male and 2 female.
Order #1142...$**3.95**



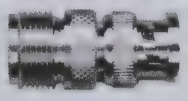
UHF-T 3F
UHF "T" adapter. 3 female.
Order #2351...$**3.95**



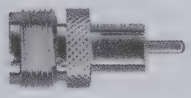
PL-258
Double female barrel adapter.
Order #2791...$**1.99**



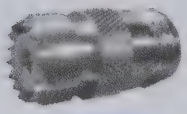
UG-363-2
Double female bulk head adapter. 2 inch.
Order #2795...$**3.99**



UG-255
SO-239 to BNC male adapter.
Order #2122...$**2.95**

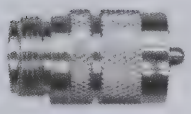


SO239-RCA
SO-239 to RCA male adapter.
Order #2118...$**1.99**

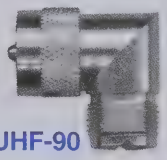


N SO239
N female to SO-239 adapter.
Order #5090...$**4.89**

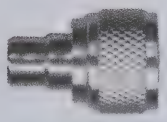
SO239-MINI
SO-239 to mini 1/8" (3.5mm) male.
Order #1619...$**3.49**



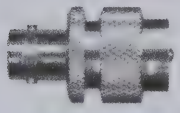
UG-83
N female to PL-259 adapter.
Order #1384...$**4.95**



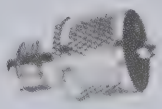
UHF-90
SO-239 to PL259 90° elbow adapter.
Order #1121...$**3.49**



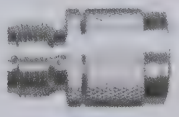
RCA-PL259
RCA female to PL-259 adapter.
Order #2690...$**1.99**



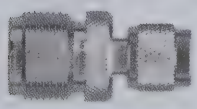
BNC-PL259
BNC female to PL259 adapter.
Order #2124...$**4.95**



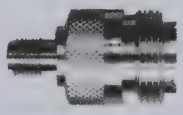
TNC-PL259
TNC female to PL259 adapter.
Order #2196...$**3.99**



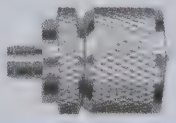
UG-146
SO-239 to N male adapter.
Order #3076...$**4.95**



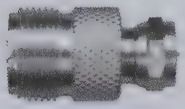
MUHF-SO239
SO239 to Mini UHF male adapter.
Order #0926...$**4.19**



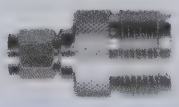
SMA F-SO239
SMA female to SO-239 (UHF) adapter.
Order #0856...$**4.69**



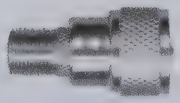
SMA F-PL259
SMA female to PL259 adapter.
Order #0859...$**4.95**



SO239 TO F
SO239 to F male adapter.
Order #2814...$**3.19**



SMA M - SO239
SMA male to SO-239 (UHF) adapter.
Order #2976...$**3.95**



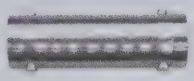
F TO PL259
F female to PL259 adapter.
Order #3111...$**2.99**

BNC ADAPTERS

BNC T FMF
BNC "T" male to two females.
Order #2646...$**2.69**

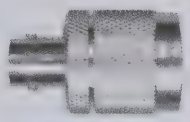
BNC T FFF
BNC "T" female to two females.
Order #2653...$**2.19**

BNC-90°
BNC male to BNC female elbow adapter.
Order #0335...$**4.95**

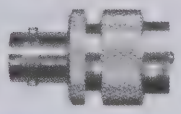


BNC F - BNC F
BNC female to BNC female barrel adapter.
Order #2654...$**.99**

BNC M - BNC M
BNC male to BNC male barrel adapter.
Order #1577...$**2.99**



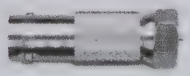
BNC TO N
BNC female to N male adapter.
Order #0931...$**5.99**



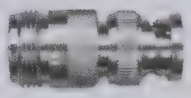
BNC F-PL259
BNC female to PL259 adapter.
Order #2124...$**4.95**

SMA F - BNC F
SMA female to BNC female adapter.
Order #5560...$**5.95**

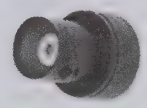
RCA BNC M
RCA female to BNC male adapter.
Order #5087...$**1.89**



BNCF TO FM
BNC Female to F male adapter.
Order #2942...$**3.09**

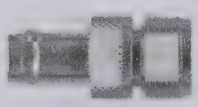


UG349/AU
N female to BNC male adapter.
Order #4571...$**4.95**



BNCJ-SMAP
BNC female to SMA male low profile-Black.
Order #0292...$**9.95**

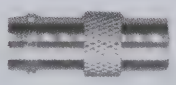
UG-255
SO-239 to BNC male adapter.
Order #2122...$**2.95**



BNCF-SO239
BNC female to SO239 adapter.
Order #0658...$**2.49**

SMA F-BNC M
SMA female to BNC male adapter.
Order #0853...$**4.49**

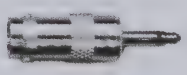
BNC F-TNC M
BNC female to TNC male adapter.
Order #0374...$**3.79**



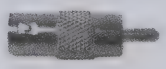
BNCF-PAL M
BNC female to PAL male adapter.
Order #4927...$**2.99**

MINIU-BNCM
Mini-UHF female to BNC male adapter.
Order #5731...$**2.99**

SMA M - BNC F
SMA male to BNC female adapter.
Order #0531...$**4.99**



BNCF TO MI
BNC female to mono 1/8" mini plug.
Order #4546...$**2.49**



BNC-RCA
BNC female to RCA male adapter.
Order #2373...$**1.99**

ANTENNA WIRE

■ **14 GAUGE STRANDED COPPER**
Excellent and very malleable. 7/22 stranded construction. .072 nom. O.D.
Order #2588 ..... **20¢ per foot**

■ **14 GAUGE COPPER-CLAD STEEL WIRE**
Hard drawn non-stretch steel center for excellent strength and copper-clad for protection and conductivity. Solid. .064 nom. O.D.
Order #2637 ..... **20¢ per foot**

■ **14 GAUGE ENAMELED COPPER WIRE**
Quality solid copper wire for shorter antenna applications (under 100 ft.). Enameled coating protects from the elements. .064 nom. O.D.
Order #2584 ..... **25¢ per foot**

■ **14 GAUGE FLEXWEAVE COPPER WIRE**
This ultra-flexible antenna wire will not kink or tangle. Can be tied and untied to insulators without soldering. Popular for portable and backpack antennas. Sold in 100 foot length.
Order #4608 ..... **$21.95**

COAXIAL CABLE

■ **RG-58A/U 50 OHM**
This is standard grade coax cable. .195 nom. O.D. -3.4 dB/100 ft.@100 MHz.
Order #2619 ..... **24¢ per foot**

LMR-200® (low loss with foil)
Order #3603 ..... **59¢ per foot**

■ **RG-8/X 50 OHM**
This very popular flexible cable has similar low loss properties of the bigger RG-8, but without its thickness. Great for shortwave antennas. .242 nom. O.D. 3.0 dB/100 ft.@100 MHz.

Black jacket RG-8/X
Order #2247 ..... **36¢ per foot**

Gray jacket RG-8/X
Order #2219 ..... **35¢ per foot**

Clear jacket RG-8/X.
Order #2208 ..... **34¢ per foot**

LMR-240® (solid center conductor)
Order #3604 ..... **69¢ per foot**

LMR-240 Ultra® (stranded center conductor)
Order #3605 ..... **89¢ per foot**

■ **RG-213 50 OHM**
Thicker lower loss coax cable with special non-contaminating jacket which will provide longer life. .405 nom. O.D. -2.0 dB/100 ft.@100 MHz.
Order #2929 ..... **89¢ per foot**

■ **RG-8/U-TYPE LOW LOSS 50 OHM**
Super low loss type RG-8 coax. For long VHF-UHF runs. .405 nom. O.D.

BURY-FLEX™ (foil and stranded center)
Order #5297 ..... **$1.19 per foot**

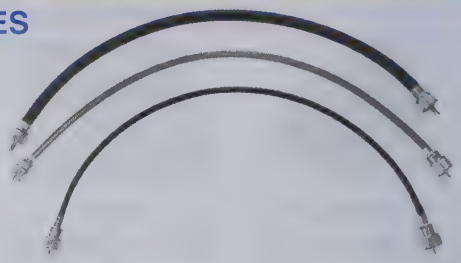
LMR-400® (foil and solid center)
Order #3606 ..... **$1.00 per foot**

LMR-400 Ultra Flex® (foil and stranded center)
Order #3607 ..... **$1.50 per foot**

LMR® is a registered trademark of Times Microwave Systems.

PREASSEMBLED COAX CABLES

As you add antenna accessories to your radio system, you will require coaxial "jumper" cables. If you add an antenna switch, a preamp or antenna tuner, you will need a jumper to connect the accessory to the antenna input of your radio. Do not let your jumper be the "weak link" in your monitoring installation. Universal Radio offers a complete line of quality coaxial jumper cables.



■ **RG-8/X Coax Cables**
Moderate price, coupled with very low loss and good flexibility combine to make this a favorite among hams and SWL's. (.242" O.D.). Our biggest seller. With PL-259 connector at each end.

- **RG-8/X 12"** PL-259 to PL-259 Jumper Cable *Order #2577* **$5.49**
- **RG-8/X 18"** PL-259 to PL-259 Jumper Cable *Order #2578* **$5.99**
- **RG-8/X 24"** PL-259 to PL-259 Jumper Cable *Order #2579* **$6.49**
- **RG-8/X 36"** PL-259 to PL-259 Jumper Cable *Order #2580* **$6.99**
- **RG-8/X 72"** PL-259 to PL-259 Jumper Cable *Order #3848* **$7.95**
- **RG-8/X 9'** PL-259 to PL-259 Jumper Cable *Order #0525* **$8.95**
- **RG-8/X 12'** PL-259 to PL-259 Jumper Cable *Order #3849* **$9.95**
- **RG-8/X 18'** PL-259 to PL-259 Jumper Cable *Order #3850* **$11.95**
- **RG-8/X 25'** PL-259 to PL-259 Jumper Cable *Order #0539* **$16.95**
- **RG-8/X 50'** PL-259 to PL-259 Jumper Cable *Order #0497* **$24.95**
- **RG-8/X 75'** PL-259 to PL-259 Jumper Cable *Order #0512* **$34.95**
- **RG-8/X 100'** PL-259 to PL-259 Jumper Cable *Order #0515* **$39.95**

■ **RG-58/U Coax Cable 36 inch PL-259 to RCA Phono Plug**
Economy with good flexibility (.195" O.D.). With PL-259 connector at one end and a male RCA phono plug at the other. Used for connecting tuners or active antennas with phono plug output.

- **RG-58/U 36"** PL-259 to RCA Custom Cable *Order #3043* **$5.99**

■ **RG-58/U Coax Cable 50 Foot PL-259 to Mini Plug**
50 feet RG-58/U with PL-259 connector at one end and a 3.5mm mini plug at the other. Used for connecting outdoor antennas to portable shortwave radios that have a mini external antenna jack.

- **RG-58/U 50'** PL-259 to Mini Plug Cable *Order #3588* **$19.95**

GROUND STRAP

This Groundstrap Cable comes in a 25 foot roll. It is 14 gauge and 1/2 inch wide.
Ground Strap *Order #4607* **$18.95**

LADDER LINE

In 300 ohm or 450 ohm on 100 foot spools.
300 Ohm 18 g ¼" sepr. *Order #2647* **$39.95**
450 Ohm 18 g ¾" sepr. *Order #3028* **$29.95**

GROUND WIRE

Ground wire should be kept as short and as straight as possible and go to a ground rod (at least 5 ft.), or a cold water pipe (*not* a gas pipe!).

■ **GROUND WIRE - 6 GAUGE SOLID COPPER**
Order #0424 ..... **99¢ per foot**

ROTOR CABLE

8 conductor stranded with UV resistant PVC outer jacket.

■ **WCR301**
2 x 18 g and 6 x 22 g for runs under 125 feet.
Order #1931 ..... **59¢ per foot**

■ **WCR302**
2 x 16 g and 6 x 18 g for runs under 225 feet.
Order #1310 ..... **79¢ per foot**

■ **WCR304**
2 x 14 g and 6 x 18 g for runs under 325 feet.
Order #4371 ..... **99¢ per foot**

ANTENNA ROPE

This double braided, color-sealed, black polyester antenna rope will not be weakened by decay or mildew and is abrasion resistant. The braided jacket protects from ultraviolet light. Sold in 100 foot rolls.

3/32"x100'	*Order #1397*	**$ 9.95**
1/8"x100'	*Order #2624*	**11.95**
3/16"x100'	*Order #2263*	**14.95**
5/16"x100'	*Order #3835*	**19.95**

COAX-SEAL® SEALANT

Use **Coax-Seal®** to protect any outdoor connection or connector. Coax-Seal is superior to electrical tape or vinyl sealant for moisture protection. The **104** consumer box features one roll which is 60 inches long and ½ inch wide. It will protect 9 connectors.
Coax-Seal 104 *Order #1194* **$2.99**

The **105** commercial box features four rolls, each of which is 12 feet long and ½ inch wide.
Coax-Seal 105 *Order #4960* **$19.95**

The **106** commercial box features four rolls, each of which is 12 feet long and 1 inch wide.
Coax-Seal 106 *Order #4961* **$24.95**

Please visit our website for additional cable types plus attenuation and power capacity tables.
www.universal-radio.com

INTRODUCTION TO AMATEUR RADIO

Amateur radio is one of the most exciting and popular pastimes in the world. There are over one million "HAMS" operating from every end of the globe. You can "meet" a coal miner in Germany, a housewife in Australia, a missionary in India, or a research scientist in Antarctica ... all without leaving your living room.

The first Ham band starts at 1800 kHz; not far from the top end of the "AM" band. There are nine additional bands available to hams throughout the shortwave (H.F.) portion of the radio spectrum. Unlike "AM" broadcast signals, shortwave signals have the ability to consistently travel great distances. Shortwave ham signals will reflect (refract) off the invisible layer above the earth called the ionosphere. Hams operating on the amateur shortwave bands have the ability to talk all over the world. Beyond the shortwave ham bands lies an area of the radio spectrum called VHF (Very High Frequency). Hams also have special bands that they can talk on in the VHF region, UHF region and even above!

While long distance communications does occasionally take place on the VHF ham bands, these bands are usually used for local communications. Many hams have portable ("walkie-talkie") or mobile VHF radios to talk to other hams in their local area using "repeaters" to extend range. Above the VHF portion of the radio spectrum lie still higher frequencies. Hams have additional bands in this region. Hams use UHF for local contacts, transmission of TV signals, satellite communications and experimentation.

Hams use several methods to communicate with each other. When ham radio began all hams utilized Morse code. Morse remains a popular mode among amateur radio operators. Transmission by Morse code is an efficient, reliable and fun way to contact distant stations. Morse code operators use a set of standard abbreviations and procedures that virtually eliminates the language barrier. TNX FOR QSO OM ES 73 means "thank you for the contact and best wishes" in any language! Hams also operate "phone" (voice). On the shortwave bands, hams use a special transmission mode called "single side band" or SSB to transmit greater distances and more efficiently use their allocated frequencies. A third method that hams use to communicate is called radioteletype (RTTY). This mode requires extra equipment. In order to communicate by RTTY, each operator previously had RTTY equipment which roughly resembled a typewriter. Today personal computers can be adapted for RTTY work. In this mode the hams simply type their messages back and forth. A new mode called Packet permits the high speed interchange of messages, data and programs between hams. Data modes such as PSK31 and JT65 can even transmit text messages during marginal conditions. Hams can even send pictures back and forth to each other over great distances! These modes are referred to as slow-scan TV (SSTV) and facsimile (FAX). But this is only the beginning! There are several special (US, Japanese and Russian) satellites circling the earth that hams can use. Hams transmit their signal into the satellite, then the satellite retransmits the signal back to earth, thus extending the "range" by a factor of 1000+! Some hams even use the moon to bounce their signals to a distant ham! The International Space Station has an amateur radio station aboard. Occasionally the *International Space Station* carries a crew member who is a ham. NASA allows astronaut hams time to communicate with their earth-bound fellow hams! Imagine the excitement of talking to the *International Space Station* as it passes overhead!

There are many aspects of amateur radio ... truly something for everyone! Many amateurs like to experiment (or just tinker!) with various antennas or circuits, others enjoy talking to distant stations (called working "DX"). Still others prefer to communicate with other local hams or experiment with the transmission of text or pictures.

You will meet many people through amateur radio. There are hams from every walk of life and every age. Many famous people are also hams including: Walter Cronkite, Ronnie Milsap, Joe Walsh, Patti Loveless, Priscilla Presley, Gary Shandling, Marlon Brando, Chet Atkins, Tony England, Owen Garriott, Joe Rudi and Art Bell.

Amateurs do more than communicate for pleasure and relaxation. In any civil emergency, where communications are disrupted, amateur radio operators are the first on the scene with trained people and reliable communications channels both locally and to remote locations. Emergency organizations like ARES (Amateur Radio Emergency Service) are groups of ham operators who volunteer themselves and the use of their equipment for county and community emergencies. They work with the Red Cross, Disaster Services, and the Federal Emergency Management Agency as well as local health, welfare and safety agencies. Examples of recent events where hams have provided important services are: the California earthquake and hurricane Katrina. Hams also provide communications for marathons, road rallies, charity drives and similar civic activities. Amateur operators also work closely with weather bureaus to spot tornados and report severe weather.

There are over 1.6 million hams worldwide, operating from nearly every country on earth. In the U.S.A. alone there are over 700,000 amateurs. Amateur radio operators are required to obtain a license from the government before talking on the air. Getting your first amateur radio license is not difficult. Effective April 15, 2000 the license structure for new American hams became simplified and the code requirement reduced or eliminated from some licenses. In late 2006 the Morse code requirement was dropped for *all* license levels!

TECHNICIAN LICENSE

The Technician Class is the entry level VHF-UHF class. This license offers great privileges and requires passing a 35 question written test. No code proficiency is required! This test is administered by qualified volunteer examiners in your area several times a year. When you pass this test you will be granted full use of all the VHF (and higher) ham bands in any mode ... including voice! A technician license will permit operation on the popular 144 MHz band, called 2 meters. A variety of inexpensive mobile and handheld 2 meter radios are available. Most cities have 2 meter "repeaters" sponsored and maintained by local amateur clubs. The repeater antenna is usually on a tall building or tower. A repeater takes an input signal and then rebroadcasts it, substantially increasing the effective range of your radio! Many repeaters also have "auto-patch" capability to make phone calls from your car or walking down the street. The technician license will even allow you to operate through the new generation of ham satellites (which act like repeaters!) giving you worldwide range on VHF!

GENERAL LICENSE

The general class "ticket" is the most popular class of license. This level requires a 35 question written test. There is no longer a code requirement. The general "ticket" dramatically expands your operating privileges! You now can operate all modes on all ham bands including voice on all the shortwave (HF) phone bands for global communications. Many hams find the privileges of the general class adequate and do not seek to upgrade to higher licenses.

EXTRA LICENSE

There are special band segments reserved for holders of the extra class licensees. Another written 50 question exam is required for the prestigious extra class.

GETTING STARTED

There are several ways to get your first license. Universal has a variety of books to help you learn the "theory" of ham radio.

Many prospective hams buy a communications receiver (or transceiver) while they are studying for their "ticket". Universal has a nice selection of new and used receivers. A good receiver may be helpful for several reasons. You will be able to listen to other amateurs, and start to learn the "language" and "buzz-words" of ham radio. Getting your first station on the air doesn't have to be expensive! Universal has a nice selection of inexpensive used equipment. Amateur radio equipment does not require any special wiring in your home. Antennas can be large, expensive and elaborate, or simple, unobtrusive and inexpensive. Many new general class hams string up a "dipole" antenna which can be purchased for about $45. You are now ready to begin the lifetime adventure of amateur radio.

A couple of helpful websites to visit are:

www.ARRL.org
www.DXing.com

ICOM

IC-718

- 160-10 Meters
- 101 Memories
- RIT
- Noise Blanker
- VOX Function
- IF Shift
- Auto Notch
- 10 Hz Readout
- UT-106 DSP standard
- Full Break-in CW
- RF Attenuator
- CW Keyer
- Front Firing Speaker
- 100 W CW/SSB Output
- 40 W AM Output
- Digital S/RF Meter

The **IC-718** covers 160-10 meters and features IF Shift, Adjustable Noise Blanker and DSP (UT-106). You get 99 regular memories and 2 scan edge memories. The transmit section features microphone compression and you get 5 to 100 watts of all mode output (4 to 40 watts AM). A Morse keyer is built-in. The meter shows output power, ALC and VSWR. Operating HF has never been easier. Requires 12 VDC at 20 amps. With HM-36 hand mic. The UT106 DSP unit is now factory installed. The reliable IC-718 is proof that HF amateur operating does not need to be complicated. 9.67 x 3.8 x 9.5 inches 8.4 lbs.

List $846.00 *Order #0718* **Call for price.**

IC-7410

The **Icom IC-7410** provides professional performance in the 160 to 6 meter amateur bands. This specialized HF rig employs the same high grade DSP unit and double conversion superheterodyne system developed from the latest technology used in the IC-7600, IC-7700 and IC-7800 series. It features a 15 kHz roofing filter. It utilizes Icom's proven IF-DSP technology. Like the IC-746Pro, it features a sharp black and white LCD. It features a superior general coverage receiver covering 30 kHz to 60 MHz with +30dbm 3rd order intercept point receive performance and ±0.5 p.p.m. stability. There is a built-in bandscope function, and Baudot RTTY capability. Other refinements include: RIT/XIT, BPF, quick split function, band edge beep and CW keyer (6-48 WPM). A large chassis heat sink is employed. There is a built-in tuner. Power is 100 watts. There are both CI-V and USB ports on the rear panel. This radio requires 13.8 VDC at 23 amps. Supplied with HM-36 hand microphone, OPC-1457 DC power cable, MB-123 carry handle, CW key plug and spare fuses.

List $2099.00 *Order #0748* **Call for price.**

IC-9100

The **Icom IC-9100** offers cutting-edge performance on HF, 6 meters and 2 meters with 100 watts plus 440 with 75 watts. The UX-9100 band unit can be added for 1200 MHz, 10 watt operation. The IC-9100 can simultaneously receive on two different bands and works as if there are two independent receivers in one radio. Each main and sub-receiver has a dedicated DSP unit providing flexible digital IF filters, AGC time constant, twin PBT, manual and auto notch filter, noise reduction, noise blanker, etc. The USB port can transfer modulation, audio, RTTY demod and DV mode data. The satellite mode synchronizes the uplink and downlink frequencies and shifts the frequency with the same tuning step. Twenty alphanumeric satellite memories store frequency, mode and tone. A built in automatic tuner covers the HF bands plus 6 meters. Other refinements include electronic keyer jack on the front panel, RTTY demodulator, four CW memories, voice squelch control, band edge beep, built in voice synthesizer. Requires 13.8 VDC at 24 amps.

List $3849.00 *Order #5091* **Call for price.**

IC-7000

The **Icom IC-7000** represents the next generation in all-mode HF/VHF/UHF transceivers. DSP at the IF level is the cornerstone of this impressive new multi-bander. Enjoy 41 bandwidths with sharp or soft filter shape. And variable twin PBT allows you to either narrow the IF passband, or shift the entire passband to eliminate QRM. This radio is also downright gorgeous. The 2.5 inch (diagonal) color TFT presents numbers and indicators in bright, concentrated colors. The display also supports a two-mode band scope. Eight of the most-used radio functions are controlled by dedicated function keys grouped around the display for easy visibility. One quick touch turns the function on and off. A longer touch activates adjustment of the function's setting. Other features include: memory keyer, detachable control head (with optional OPC-1443/1444 separation cable), 503 memories, S/PWR/SWR meter, RIT, Preamp, Attenuator, adjustable SSB bandwidth, DTMF memory, NTSC output, VOX, full break-in and adjustable CW pitch. Power is 100W on HF+6M, 50W on 2M and 35W on 440 MHz. Requires 12 VDC at 22 A.

Order #0000 Discontinued

IC-7200

The **Icom IC-7200** is a robustly built amateur transceiver providing coverage of HF amateur bands plus 6 meters. Power is 2-100 watts (AM 40W). Features include receive from 30 kHz to 60 MHz. DSP filtering with 51 bandwidths, digital twin passband tuning, manual notch filter, 6 kHz roofing filter, keypad entry, dual VFOs, voice synthesizer, 20 dB attenuator, 201 memories, preamp, RIT, scanning, 1 Hz tuning and more! The excellent general coverage receiver tunes from 30 kHz to 60 MHz. The meter displays Power/SWR/ALC. Power is 2 to 100 watts (40 watts AM). Although the IC-7200 is not waterproof, extra design steps have been applied to the front panel buttons and knobs. This provides a measure of protection against water intrusion. There is even a USB port on the rear panel! Comes with: HM-36 hand mic, DC cord and spare fuses. 9.5 x 3.75 x 11.2 inches 12.1 lbs. Requires 12 VDC at 22 amps.

List $1299.00 *Order #0026* **Call for price.**

UNIVERSAL BUYS RADIOS

Call, email or write and tell us what you have to sell. We can provide a quote, subject to inspection.

IC-7600

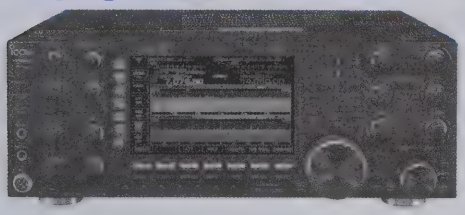
- 5.8" Color
- 101 Memories
- RIT/XIT
- ±0.5 PPM Stability
- VOX Function
- RTTY Demod
- Digital Noise F.
- Dual Watch
- 100 W Output
- Built-in Auto Ant Tuner
- Full Break-in CW
- Spectrum Display
- Memory Pad
- 32 bit DSP
- Twin Digital PBT
- 1 Hz Readout
- 4 Ch. Memory Keyer
- Digital/Analog Meters

The **IC-7600** 160 to 6 meter transceiver uses Icom's proven IF-DSP technology and features selectable roofing filters at 3kHz, 6kHz and 15kHz. 104dB dynamic range and +30dbm 3rd order intercept point is achieved on the HF bands. The 5.8 inch (diagonal) color WQVGA display has a quick-start LED backlight and views well from any angle. Dual frequency watch is available with same band operation. Features include: PBT, RIT, XIT, keypad, 24 hour clock-timer, RTTY/PSK31, 101 memories, multiple scan modes, voice recorder and voice synthesizer. With HM-36 hand mic and DC cord. Requires 12 VDC at 23 amps.

List $4469.00 *Order #0076* **Call for price.**

ICOM

IC-7850



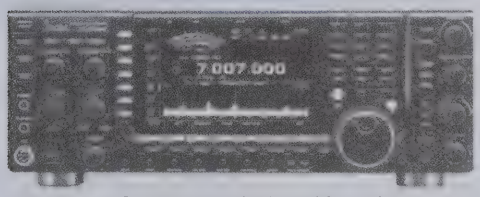
- 200W Output
- Digital Voice Recorder
- Waterfall
- High Stability OCXO
- Dual Receive
- 7" Dia. Color TFT
- Spectrum Scope
- Voice Synthesizer
- Automatic Tuner
- RTTY/PSK31 Demod

The limited edition, ***50th Anniversary Edition* Icom IC-7850** perfects HF operation with new features such as a 1.2kHz optimized roofing filter to improve in-band adjacent signal performance. The up-conversion design supports a dynamic range that outperforms competitors' similar models in the 2 to 10 kHz separation tests. The IC-7850 employs a direct digital oscillator (DDS) with a voltage controlled SAW oscillator (VCSO). This 1st LO design sets a new benchmark for phase noise with -150dBc/Hz at 10kHz offset (and -140dBc/Hz at 1kHz offset). The new high-resolution waterfall screen shows the changing amplitude of frequencies over time. An enhanced spectrum scope promotes fast and accurate scan and can be operated with PC mouse via USB port. A dual scope function shows simultaneous activity in both bands. The 7850 comes with: 64 Mb compact flash card, AC cord and rack mount handles. 160-6 Meters 120 VAC. Mic not included. 16.8 x 5.5 x 16.5 inches. 51 lbs.

Order #4850 **Call for price.**

This device has not been approved by the F.C.C.
This device may not be offered for sale or lease or be sold or leased until approval of the F.C.C. has been obtained.

IC-7700



The **Icom IC-7700** was designed from the start to be the ultimate contest transceiver. It employs the latest technology to give you the competitive edge. Two independent DSP units (of the same type used in the famous IC-7800) are built in: one for the transmitter & receiver and one for the spectrum display. You will enjoy a +40dBm 3rd order intercept point and ultra wide dynamic range. There is an automatic tracking preselector to reject out-of-band interference. The newly designed push-pull MOS-FET amplifiers work with 48VDC, providing a powerful 200W of output power at full duty cycle with low IMD in all bands. The wide 7 inch diagonal color TFT LCD, 800x480 pixel display is dazzling. The front panel has two USB ports. The rear panel offers a host of I/O connections including an SP DIF IN/OUT, Ethernet jack and VGA monitor jack. 120 VAC. 16.8 x 5.5 x 16.6 inches 53 lbs. Mic not included.

List $9150.00 *Order #0277* **Please Call**

ICOM

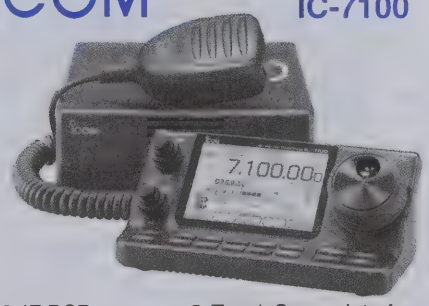
Optional Accessories

Order #	Model	Item Description	List Price	Your Price	IC-718	IC-7100	IC-7200	IC-7410	IC-7600	IC-7700/7850	IC-9100
2606	AH-2b	Mobile Antenna	$599.00	$439.95	■	■	■	■	■		■
3702	AH-4	Mobile HF+6M Auto Tuner	345.00	314.95	■	■	■	■	■		■
3438	AT-180	HF+6M Auto Tuner [pg. 80]	599.00	499.95	■	■	■				
2777	CR-338	High Stability Crystal ±0.5 ppm	105.00	79.95	■						
5782	CS-7100	Programming Software	50.00	39.95		■					
2771	CT-17	CI-V Level Converter	190.00	144.95	■	■	■	■	■	■	■
0903	FL-52A	500 Hz CW Filter 455 kHz	284.00	209.95	■						
0909	FL-53A	250 Hz CW Filter 455 kHz	Disc.		■						
0798	FL-430	6.0 kHz Roofing Filter	125.00	99.95				■			■
0792	FL-431	3.0 kHz Roofing Filter	125.00	99.95				■			■
0327	FL-222	1.9 kHz SSB Filter 455 kHz	300.00	219.95	■						
0000	FL-257	3.3 kHz SSB Filter 455 kHz	Disc.		■						
1951	HM-36	Hand Mic with Up / Down	100.00	74.95	■		■	■	■	■	■
0311	HM-151	DTMF Hand Mic with Up / Down	145.00	104.95		■					
5836	HM-198	Hand Mic with Up / Down	55.00	39.95		■					
1088	MB-23	Carrying Handle	20.00	14.95	■						
3431	MB-62	Mobile Mounting Bracket	50.00	39.95		■					
5957	MB-105A	Controller Mounting Bracket	30.00	24.95		■					
0286	MB-106	Carrying Handle IC-7000	27.00	19.95							
5146	MB-116	Rack Handles	92.00	69.95			■				
5145	MB-117	Carrying Handle	30.00	22.95			■				
5147	MB-118	Mobile Mounting Bracket	30.00	22.95			■				
6052	MBA-1	Controller Mounting Bracket	40.00	32.95		■					
2650	MBF-1	Suction Bracket for MBA-1	85.00	69.95		■[2]					
1120	OPC-589	Adapter (8 pin to modular mic)	45.00	34.95		■					
3436	OPC-599	Adapter (7+8 pin to 13 pin acc)	80.00	59.95	■	■	■	■			
4309	OPC-025D	DC Power Cable	45.00	34.95	■						
1196	OPC-1457	DC Power Cable	55.00	44.95		■	■	■	■		■
4735	OPC-1529R	Serial data cable to PC.	41.00	31.95		■					■
6075	OPC-2253	Separation Cable 11.5 Ft. (3.5m)	75.00	59.95		■					
1561	OPC-2254	Separation Cable 16.4 Ft. (5.0m)	95.00	69.95		■					
2694	PS-125	Power Supply 13.8V at 22A	446.00	349.98	■						
4014	PS-126	Power Supply 13.8V at 22A	499.00	429.95		■	■	■	■		■
5644	SM-30	Desk Microphone With Up/Down	195.00	139.95	■	■[1]	■	■	■	■	■
3839	SM-50	Desk Microphone With Up/Down	400.00	299.95	■	■[1]	■	■	■	■	■
5874	SP-35	External Speaker Mobile	77.00	59.95		■	■				
1696	SP-23	External Speaker with Filters	265.00	199.95	■			■	■	■	■
0233	SP-33	External Speaker with Filters	120.00	99.95	■	■	■	■	■	■	■
3097	UT-106	DSP NR/Notch	195.00	149.95	■[3]						
4740	UT-121	D-STAR option	229.00	169.95							■
5322	UX-9100	1.2 GHz Band Module	824.00	699.95							■

[1]Requires OPC-589 [2]Requires MBA-1 [3]Standard on current production.

ICOM

IC-7100



- IF DSP
- Touch Screen Interface
- Variable RF Out
- Slant Top Controller
- Extended Rx.
- SWR Graphic Display
- Noise Blanker
- SD Card Slot
- 505 Memories
- Speaker on Controller
- D-Star DV Mode
- Notch
- RIT
- Attenuator

The **IC-7100** covers 160-6 meters, 2 meters and even 440 MHz. DSP at the IF level is the cornerstone of this impressive new multi-bander. RF power is HF 100 watts, 50 MHz 100 watts, 144 MHz 50 watts and 430 MHz 35 watts. Extended receive provides coverage from 30 kHz to 199.999 MHz and 400-470 MHz. Enjoy ±0.5 ppm frequency stability and 505 memory channels. There is a built in radioteletype decoder. And D-Star is built in! The remote head, with built-in speaker, offers full control of the radio. And the head rear panel features jacks for key, speaker and microphone. This radio requires 13.8 VDC at 22 amps. The rear panel has an antenna input for HF/6M and one for VHF/UHF bands. The IC-7100 includes HM-198 hand mic, DC power cable, OPC-2253 11 foot separation cable, 13 pin acc cable and USB cable.

List $1999.00 *Order #3071* **Call for price.**

YAESU

FT-817ND

- Dual VFOs
- VOX & RIT
- IF Shift
- 60 Meters
- 200 Memories
- CTCSS/DCS
- With NiMH Battery
- Spectrum Display

The iconic **Yaesu FT-817ND** is a fully self-contained, battery-powered, low power QRP amateur MF/HF/VHF/UHF transceiver for portable/camping/mountain top use. Providing coverage of the 160-10 meter amateur bands (*including* 60 meters) plus the 6 M, 2M and 70 cm bands, the FT-817 includes operation in the SSB, CW, AM, FM and digital modes. It may operate from the included FNB-85 NiMH battery, 13.8 VDC or 8 AA cells (not supplied) and provides up to 5 watts output when on external DC power (2.5 watts on cells). LCD backlight may be disabled. With MH-31A8J mic.

List $934.00 *Order #1817* **Call for price.**

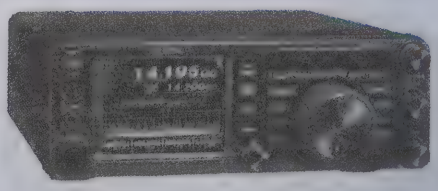
FT-857D

- 160-2 M + 440
- Electronic Keyer
- 200 Alpha Mems
- DSP2 Included
- 100 W HF Output
- 50 W 2M Output
- 20 W 440 MHz Output
- Spectrum Display

The **Yaesu FT-857D** is the worlds's smallest HF/VHF/UHF multimode amateur transceiver. But don't let the diminutive size fool you. The FT-857D is loaded with features, high power output and an outstanding receiver. It provides coverage of the 160 to 6 meter bands, *including 60 meters* plus the 144 MHz and 430 MHz bands! And look at the receive coverage: 0.1-76, 108-174 and 420-512 MHz. Refinements include: spectrum display, 32 color display, beacon mode, keyer, 200 alphanumeric memories and CTCSS. This enhanced **D** version includes the DSP2 unit installed. Includes MH-31A8J hand mic.

List $1160.00 *Order #1857* **Call for price.**

FT-991



- Spectrum Scope
- TCXO
- IF Shift & Notch
- C4DM
- High Speed IF DSP
- HF+6M Autotuner
- TFT Color Touch-Display
- Two Roofing Filters

The **Yaesu FT-991** is a multimode high-power base/mobile transceiver covering HF 160 to 10 meters plus 50/144/430 MHz. Receive is 0.1-56, 76-108, 118-164 and 420-470 MHz. Power is 100 Watts HF/6m and 50 Watts 2m/70cm. The autotuner covers 160-6 meters with 100 memories for quick tune times. The built-in ±0.5 PPM DDS/PLL local oscillator provides high stability for demanding digital modes.
8.8" x 3" x 9.9" 9.7 lbs.

Order #3991 **Call for price.**

[1]This device has not been approved by the F.C.C. This device may not be offered for sale or lease or be sold or leased until approval of the F.C.C. has been obtained.

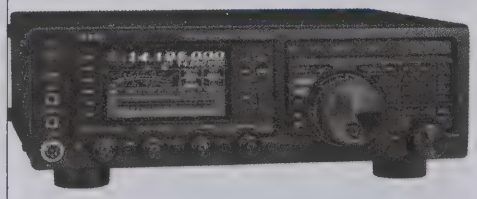
FT-450D

- .03-56MHz Rec.
- Notch, Contour
- IF Shift, IF Width
- Digital NR
- Adjustable RF Power
- 100 Watts Output
- Antenna Tuner
- Voice Synthesizer

The **Yaesu FT-450D** covers HF and 6 meters all in an easy to use, compact package. It employs state of the art IF DSP technology to bring an array of advanced features to the operator. Enjoy 500 regular and 2 voice memories plus a voice synthesizer. A 10 kHz roofing filter is standard. The backlit LCD display is very sharp. These new **D** version features include: key Illumination, foot stand, 500 and 300 Hz CW Filters, and improved knob set. 9 x 3.3 x 8.5 inches 7.9 lbs. The FT-450D comes with MH-31A8J hand mic, mic clip and DC power cord. This radio requires 13.8 VDC at 22 amps.

List $1000.00 *Order #0452* **Call for price.**

FTDX1200

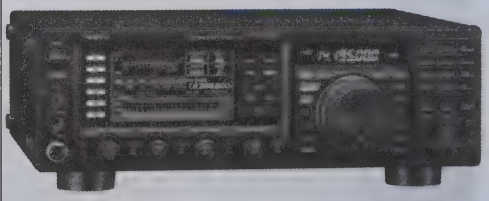


- Dual VFOs
- 2 Antenna Jacks
- DSP RX/TX
- Spectrum Scope
- Shift, Notch, Passband
- Digital Noise Reduction
- IF Width
- Auto Antenna Tuner

The Yaesu **FTDX1200** covers 60 to 6 meters with 5 to 100 Watts on SSB, CW, and FM (25W AM). It uses 32-bit high speed floating point DSP. A built-in 4.3-in TFT wide full color High Resolution Display with loads of information provides superior operability and visibility for the FTDX1200 owner. A High Speed Spectrum Scope located just below the LCD. Roofing Filters (3/6/15 kHz) are featured. The optional *#6072* FFT-1 Unit adds AF-FFT scope function, RTTY/PSK31 Encode/decode, CW decode. The FTDX1200 is supplied with MH-31B8 hand mic, DC cord, spare fuses and manual.

List $1900.00 *Order #1200* **Call for price.**

FTDX3000



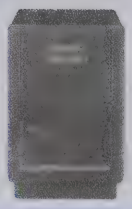
- 160-6 Meters
- Electronic Keyer
- 9 MHz IF Output
- USB Interface
- 100 Watt
- Spectrum Display
- First IF Roofing Filters
- RTTY/PSK en/decoder

The Yaesu **FTDX3000** transceiver provides ultimate weak signal receiver performance in crowded, strong signal environments. General coverage receive is available from 30 kHz to 56 MHz. Power is adjustable 5 to 100 watts for the amateur bands from 160 to 6 meters. A built-in 4.3-in TFT wide full color high resolution display provides superior operability and visibility for the FTDX3000 user. A High Speed Spectrum scope located just below the LCD display provides the information needed to place the operator at the right place on the band with the right receiver setup to have a satisfying experience with a casual QSO chat or while digging out a rare weak signal contact. Other refinements include: USB interface, 9 MHz IF output, RX-only antenna input, RTTY/PSK encoder/decoder, high speed antenna tuner and a specialized 50 MHz amplifier. Requires 13.8 VDC at 23 amps. Includes MH-31B8 hand mic, DC cable, spare fuses and plugs. 14.4 x 4.5 x 12.4 inches 22 lbs.

List $3500.00 *Order #3000* **Call for price.**

YAESU

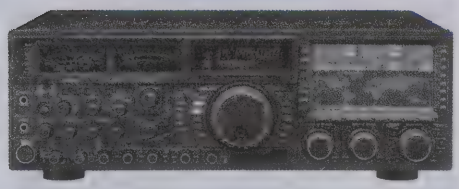
DMU-2000



The **Yaesu DMU-2000** option provides a wide array of informative and useful displays for the FT-5000/2000/950 series including: spectrum scope, audio scope/oscilloscope, swept-frequency SWR, memory channel list, world clock with grayline, rotator control and log book.
Requires PC display and keyboard (not supplied).

YAESU

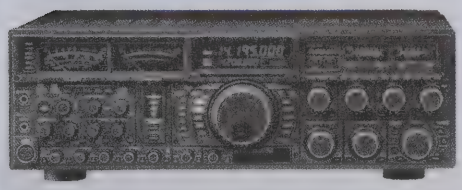
FTDX9000D



The **Yaesu FTDX9000** is available in three configurations including 200 and 400 watt versions. Flash memory and keyboard connector ensure that your station will evolve as the FTDX9000 does. Receiver highlights include: selectable roofing filters and a typical IP3 in excess of +40 dBm, 32-Bit IF DSP with adjustable filter response contours, variable bandwidth, variable passband center, noise reduction and IF Manual notch. You get true dual receive with identical receivers for Main and Sub. You can watch the band with a fast acting spectrum display (D version) with variable frequency range. Transmitter highlights include: both 200 and 400 watt versions, Class-A operation at 100 watts (75 watts with the 200 watt version), IF DSP speech processing and microphone equalization and monitor for voice data and CW modes. There is a low level transverter output port. Other refinements include: flash memory port, PS/2 keyboard input, PC data port, direct frequency entry, analog meters, and rotor interface jack for direction indication on the TFT display (D version only). The rear panel features four TX/RX antenna jacks plus two RX-only jacks. The Yaesu FTDX9000D deluxe version features 200 watts, built-in memory board, main & sub receiver VRF, full dual receive, internal power supply.

List $12800.00 *Order #0900* **Call for price.**

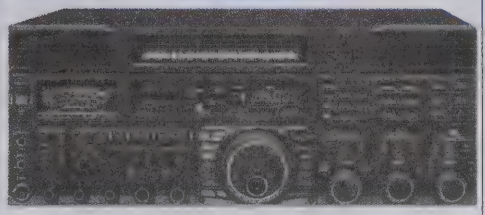
FTDX9000MP



The **Yaesu FTDX9000MP** boasts an incredible 400 watts output, dual analog meter sets, LCD display, memory card installed, main and sub receiver VRF, full dual receive, external power supply with twin speaker enclosure.

List $14080.00 *Order #0442* **Call for price.**

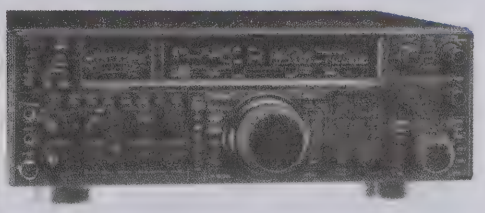
FTDX5000MP



The **Yaesu FTDX5000** series of HF/50 MHz 200 watt transceivers are a new premium class of Yaesu radios with two fully independent receivers plus many unique options and accessories designed to meet the performance requirements of even the most demanding amateur radio operator. Yaesu engineers have achieved 112 dB dynamic range and an IP3 [3rd Order Intercept Point] of +40 dBm (CW, 500 Hz BW). Newly designed, extra sharp roofing filters for VFOA/Main receiver are selectable between 300 Hz (optional on some versions), 600 Hz, 3 kHz, 6 kHz and 15 kHz. Yaesu incorporates two of their famous custom designed 32 bit floating point DSP chips based on the TI TMS320C6727B running at 300 MHz ... one for VFO A and one for VFO B. Enjoy state of the art on the transmit side with a pair of reliable VRF150 FETS in a push-pull configuration yielding 200 watts (75 watts class A operation). Three electroluminescent subdisplays indicate sub frequency, graphical wave and menu functions. The rear panel features a 9 MHz IF out from VFO Main receiver. Other enhancements include: large multifunction meter and variable CW audio peak filter. The **FTDX5000MP** version includes the SM5000 Station Monitor (shown above) and has ± 0.05 ppm TCXO and 3 kHz roofing filter.

List $8000.00 *Order #0355* **Call for price.**

FT-2000
FT-2000D



- 160-6 Meters
- Electronic Keyer
- VRF Preselector
- Dual Receive
- 100 Watt version
- 200 Watt version
- First IF Roofing Filters
- Analog Meter

The **Yaesu FT-2000** follows in the tradition of venerable FT-1000 series, and incorporates an amazing number of advanced features from the FT-9000 series. Covering 160 through 6 meters, this transceiver is available in two configurations: a 100 watt version with internal power supply and a 200 watt version with external power supply. The receiver front-end includes a Variable RF Tuning preselector which works in conjunction with a bank of fixed bandpass filters. This provides a front-line defense against strong out of band signals. The result is improved dynamic range and a higher intercept point. The First IF roofing filters (3/6/15 kHz) increase dynamic range in crowded band conditions. Dual receive is supported even within the same band. There is an external display port for viewing of RF and audio with optional DMU2000 Data Management Unit and monitor.

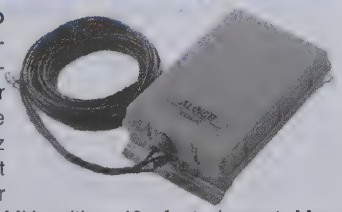
Yaesu FT-2000 160-6 Meters 100 watts
Order #0000 *Discontinued*

Yaesu FT-2000D 160-6 Meters 200 watts
Order #0000 *Discontinued*

✔ Please see the **IF-2000** option on page 16.

ALINCO

EDX2

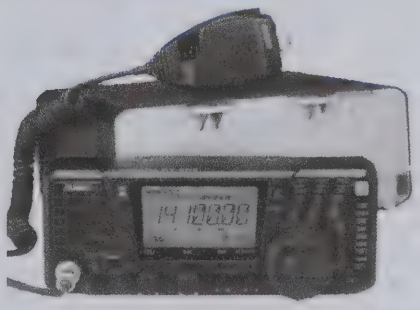


The **Alinco EDX-2** automatic antenna tuner can operate 3.5-30 MHz with a 10 foot antenna, or from 1.8-30 MHz with a 40+ foot element. Max. input power is 200 watts. Requires 13.8 VDC. 9 x 4 x 16 inches 8 lbs.

List $385.00 *Order #0932* **$339.95**

ALINCO

DX-SR9T



The **Alinco DX-SR9T** covers 160 to 10 meters in SSB, CW, AM and FM. The transmitter delivers a 100 watts in SSB, CW and FM (40 W AM). It is similar in architecture to the DX-SR8T but addis some *software defined radio* capabilities.

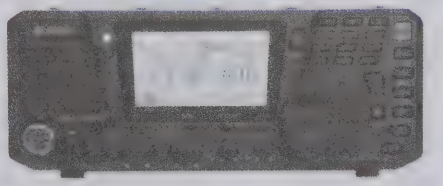
List $799.00 *Order #0190* **Please Call**

DX-SR9T OPTIONS

#	Item	Description	Price
5186	**EDS-17**	Front Panel Extension	$54.95
3489	**EMS-14**	Desk Microphone	119.95
0932	**EDX-2**	External Auto Tuner	339.95
1695	**ERW-7**	USB Radio to PC cable	45.95

ALINCO

DX-SR8T



The **Alinco DX-SR8T** covers 160 to 10 meters in SSB, CW, AM and FM. The transmitter delivers a powerful 100 watts in SSB, CW and FM (40 watts on AM). And three power levels may be selected: 100 watts, 10 watts and a variable QRP setting of 0.1~2 Watts. The receiver tunes from 30 kHz to 35 MHz. Other features include: 600 memories, band and memory scanning, attenuator, preamp, RIT, XIT, IF shift and NB. With EMS-64 hand mic, mic hanger and DC cord. Requires 12 VDC at 20 amps. 9.45 x 3.95 x 11.54 inches.

List $580.00 *Order #5008* **Please Call**

DX-SR8T OPTIONS

#	Item	Description	Price
5186	**EDS-17**	Front Panel Extension	$54.95
3489	**EMS-14**	Desk Microphone	119.95
0932	**EDX-2**	External Auto Tuner	339.95

YAESU

Accessories

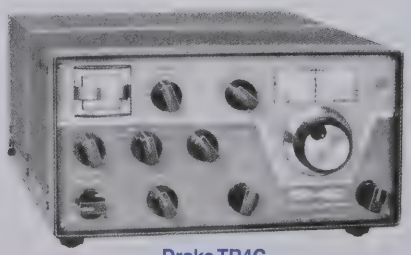
Order #	Model	Item Description	List Price	Your Price	FTDX1200	FT-817/ND	FT-450D	FTDX3000	FT-857/D	FT-897/D	FTDX5000
4632	ADMS-4AU	Windows CD and USB cable	$48.77	$39.95		■					
4633	ADMS-4BU	Windows CD and USB cable	48.77	39.95					■	■	
4044	ATAS-25	Portable manual Antenna	320.00	229.95		■	■		■	■	
4547	ATAS-120	Mobile Antenna	520.00	369.95			■		■	■	
3804	ATBK-100	VHF/UHF Base for ATAS120	130.00	99.95			■		■	■	
1615	CD-24	Charge adapter for FNB-78	190.00	129.95						■	
2298	CSC-83	Soft carry case	32.00	24.95		■					
0379	CT-39A	Packet Cable	11.55	9.95		■	■		■	■	
3821	CT-58	VL1000 Band Data Cable	40.00	29.95					■	■	
3822	CT-62	Packet Cable	40.00	29.95		■			■	■	
2301	CT-178	Cable to VL1000	100.00	79.95				■			
4762	DMU-2000	Data Management Unit	1375.00	Call							■
3112	DVS-6	Digital Voice Recorder	80.00	59.95	■			■			
3153	FBA-28	Cell Holder (8xAA)	17.00	14.95		■					
4540	FC-30	External Auto Antenna Tuner	340.00	249.95			■		■	■	
0643	FC-40	External Auto Antenna Tuner	440.00	319.95	■		■	■	■	■	
6072	FFT-1	FFT Unit	220.00	169.95	■						
2622	FH-2	Wired Remote Keypad	130.00	99.95	■						
4542	FNB-78	NiCd 13V 4500 ma Battery	190.00	139.95						■	
0874	FNB-85	NiMH 9V 1400 ma Battery	90.00	64.95		■					
4543	FP-30	Internal Power Supply	330.00	249.95						■	
3631	FP-1023A	Power Supply 23A	216.88	169.95	■		■		■	■	
3640	FP-1030A	Power Supply 25A Meters	345.22	269.95	■		■		■	■	
0287	MD-100A8X	Desk Top Microphone	210.00	159.95	■			■		■	
1359	MD-200A8X	Desk Top Microphone	580.00	419.95	■			■			■
0406	MH-31A8J	Hand Mic with Up-Down	60.00	44.95		■	■		■	■	
0413	MH-31B8	Hand Microphone	60.00	45.95	■			■			
0420	MH-36E8J	DTMF Hand Microphone	80.00	59.95		■	■		■	■	
4414	MH-59A8J	DTMF Hand Microphone	90.00	64.95					■	■[3]	
0548	MH-67A8J	Hand Mic with Up-Down	39.00	31.95			■				
0568	MHG-1	Carry Handle	15.00	12.95			■				
2680	MMB-80	Mobile Mounting Bracket	50.00	37.95						■	
0855	MMB-90	Mobile Mounting Bracket	50.00	37.95			■				
6208	MTU-160	Ext. µ-Tuning Kit 160m	650.00	599.95							■[1]
6209	MTU-80/40	Ext. µ-Tuning Kit 80/40m	650.00	599.95							■[1]
6210	MTU-30/20	Ext. µ-Tuning Kit 30/20m	650.00	599.95							■[1]
4544	PA-26B	A.C. Power Sup. for CD-24	109.08	79.95						■	
1145	SCU-17	USB Interface Unit	220.00	169.95	■	■	■		■	■	
1789	SP-8	Speaker with Audio Filter	250.00	189.95							
2604	SP-2000	Speaker with Audio Filter	280.00	199.95				■			■
1301	SP-9000	Speaker with Audio Filter	500.00	369.95							
2187	TCXO-9	High Stab. Osc. <±.5 ppm	150.00	109.95		■			■	■	
5068	T9207451	Cable for Linear Amp	36.61	32.95			■				
2257	XF-126CN	300 Hz Roofing Filter	270.00	199.95							■[4]
1255	YF-122C	500 Hz CW Collins Filter	260.00	189.95		■			■	■	
4188	YF-122CN	300 Hz CW Collins Filter	260.00	189.95		■			■		
0803	YF-122S	2.3 kHz SSB Collins Filter	260.00	189.95		■			■	■	
5924	XF-127CN	300 Hz CW Collins Filter	270.00	199.95				■			
2342	YH-77STA	Stereo Headphones (pg. 34)	125.00	89.95	■		■				
3847	YSK-857	Head separation kit (19.6 ft.)	70.00	59.95					■		

[1]Kit includes enclosure [2]For sub-receiver [3]Only for D version [4]Included in MP

NOTE: Accessories for the new **Yaesu FT-991** were not known at press-time.

CLASSIC RADIOS

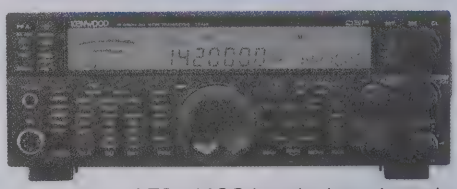
Are you looking for an older vintage transceiver? The **Used Department** at Universal Radio contains an ever changing assortment of used amateur radio equipment. Please visit our website to review our current offerings with photos for many key items. Our ***Radio Archive*** section includes an informative presentation of recently sold radios with values, specifications and photos. It's like a radio museum! Equipment changes daily and is subject to prior sale.



Drake TR4C

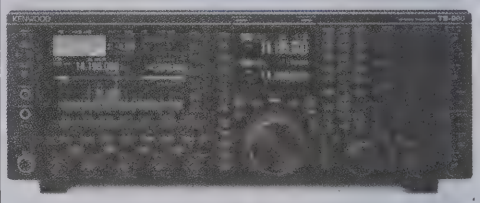
KENWOOD

TS-590SG



The **Kenwood TS-590SG** has the best dynamic range in its class when handling unwanted adjacent off-frequency signals thanks to a down-conversion receiver, narrow first roofing filter and dedicated first mixer. This enhanced version includes 500 Hz and 2.7 kHz roofing filters to better deal with adjacent signals. The result is excellent receive performance, revealing signals that would be hidden to lesser rigs. Kenwood was the first in the amateur radio market to deploy DSP based AGC at the IF stage with the TS-870S and adopts technology from the flagship TS-990. With this new transceiver, a 32-bit DSP is deployed from the IF stage forward, the TS-590S marks a bold new chapter in Kenwood's proud history of making compact, high-performance transceivers. The DSP based AGC has been improved for the target signal in the IF passband. The result is greatly improved in-band IMD characteristics that are on par with those "top of the line" transceivers costing much more (for 160/80/40/20/15 CW/SSB/FSK). Covering 160 to 6 meters with 100 watts, this radio features: automatic tuner, RIT/XIT, keypad entry, full & semi break-in, NR, 10 Hz dual VFO display, USB port, dual quiet low RPM fans and is *SkyCommand II* ready. New features include Morse decode and display, split function, variable color display and enhanced autotuner. 11 x 4.2 x 13.2" 16.3 lbs.
List $1964.00 *Order #1590* **Please Call**

TS-990S



The **Kenwood TS-990S** transceiver has a dual TFT display and dual receivers covering the HF amateur bands plus 6 meters. It also features narrowband roofing filters on the main receiver in a full down-conversion configuration. The TS-990S achieves the highest basic reception performance of any radio in the TS series, through the careful selection of circuits, components and accelerating analysis using triple DSP configuration. There is a dedicated DSP for the main receiver, sub-receiver and band scope. Advanced AGC control combines analog and digital technology. You get both transmit and receive DSP equalizers. RF power is adjustable from 2 to 200 watts. This radio features a built-in automatic antenna tuner and built-in AC power supply. It has a serial port, USB ports and Ethernet port. More specifications and photos at: www.universal-radio.com
List $8249.00 *Order #3990* **Please Call**

KENWOOD

TS-2000/TS-2000X

- High Stability
- HF-6M Tuner
- Dual Receive
- Backlit Panel
- IF DSP Main Band
- AF DSP Sub Band
- CTCSS/DCS
- Built-in Packet TNC

The **Kenwood TS-2000** is an all band HF/VHF/UHF transceiver with exceptional features and versatility. Wide band Main HF reception includes: 30 kHz - 60 MHz. On VHF you get: 142-152, 420-450 and 1240-1300 MHz (optional). Sub band (AM/FM modes only) reception includes: 118-174, 220-512 MHz. Output is 100 watts on HF, 6 meters and 2 meters, 50 watts for 440 MHz and optionally 10 watts for 1200 MHz (if UT-20 installed). The TS-2000 includes advanced features such as: IF DSP on main band, AF DSP on sub band, built-in tuner (1.9-54 MHz), built-in keyer with 3 memories, high stability TCXO, 300 memories (290 are alphanumeric) and built-in TNC. Requires 12 VDC at 20.5 amps. 10.675 x 3.75 x 12.5 inches 17.2 lbs.

List $2186.00 *Order #1978* **Please Call**

The **Kenwood TS-2000X** is a special version with the UT-20 1.2 GHz option factory installed. This version is ideal for amateur satellite operations. 10.675 x 3.75 x 12.5 inches 18.1 lbs.

List $2835.00 *Order #2797* **Please Call**

TS-B2000

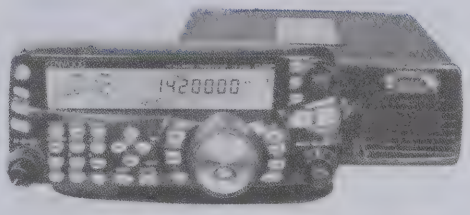
- High Stability
- HF-6M Tuner
- Dual Receive
- CTCSS/DCS
- IF DSP Main Band
- AF DSP Sub Band
- Built-in Packet TNC
- Option control head

The **Kenwood TS-B2000** is a 'silver box' version of the TS-2000. It is designed for computer operation with the supplied ARCP-2000 Radio Control program. Or it is suitable for mobile use with the optional RC-2000 Controller Kit (not included). See page 66 for information on *Kenwood's Skycommand System II+*.
10.675 x 3.75 x 12.5 inches 16.6 lbs.

List $1958.00 *Order #1937* **Please Call**

KENWOOD

TS-480SAT
TS-480HX



- 160-6 Meters
- Multiple Scan
- Memory Keyer
- Remote Head
- AF DSP
- 10 Hz Tuning
- Digital Noise Limiter
- 100 Alpha Memories
- Wide-Narrow Dev
- Dual VFO Display
- 1750 Hz Tone
- Optional Voice Synthz.

The **Kenwood TS-480SAT** is an all mode HF plus 6 meter amateur transceiver. It features AF digital signal processing on both receive and transmit. A quad-mixer provides receiver dynamic range equivalent to that of the TS-950 class. Receive coverage is 500 kHz (30 kHz VFO) to 60 MHz and direct frequency keypad entry is supported. The stand-alone LCD control panel features its own speaker and can be placed up to 16 feet away from the main unit. The supplied tabletop panel bracket is convenient for base use. 100 Alphanumeric memories are available and multiple scan functions are supported including: program scan, VFO scan, memory scan, group scan, subtone scan and CTCSS scan. The TS-480SAT can transmit 100 watts (5 watt minimum RF output for QRP work). Many operational parameters can be set to your operating preferences via the menu system. Requires 12 VDC at 20.5 amps.
Note: The **TS-480HX** is similar, but provides 200 watts (100 on 6 meters) and does *not* have the built-in antenna tuner. Requires 12 VDC at 20.5 + 20.5 amps.

Kenwood TS-480SAT 160-6 Meters 100W + AT
List $1511.00 *Order #0480* **Please Call**

Kenwood TS-480HX 160-6 Meters 200W [no AT]
List $1659.00 *Order #2480* **Please Call**

KENWOOD Optional Accessories

Order #	Model	Item Description	List Price	Your Price	TS-990S	TS-590S/SG	TS-2000/X/B	TS-480SAT/HX
3296	**ARCP2000**	Radio Control Program	$90.00	**$79.95**			■	
2195	**DRU-3A**	Digital Recorder	152.00	**129.95**			■	
0357	**HS-5**	Deluxe Headphones	87.00	**74.95**		■	■	■
0358	**HS-6**	Lightweight Headphones	65.00	**59.95**		■	■	■
6344	**KES-3S**	Mobile Speaker	42.25	**32.95**		■	■	■
4273	**KPS-15**	Switching Supply 13V at 23 A	144.00	**119.95**			■	
0248	**MB-430M2**	Mobile Mounting Bracket	55.00	**47.95**		■	■	
1380	**MB-480**	Portable Mounting Bracket & Handle	51.00	**44.95**				■
0230	**MC-43S**	Hand Mic with Up/Down 8 Pin	65.25	**56.95**		■	■	■[1]
1023	**MC-47**	Hand Mic programmable	65.25	**58.95**		■		
0368	**MC-60A**	Deluxe Desktop Mic With Preamp	174.00	**149.95**		■	■	■[1]
1870	**MC-90**	DSP Compatible Desktop Mic	290.00	**249.95**			■	
1539	**MJ-88**	Modular to 8 pin mic adapter	35.00	**29.95**				■
2963	**PG-2O**	DC Power Cable 22 foot	49.30	**44.95**		■	■	
4143	**PG-2Y**	DC Power Cable 13 foot	44.00	**39.95**			■	
0391	**PG-2Z**	DC Power Cable 6 foot	42.00	**36.95**			■	
2965	**PG-4Z**	Panel Extension Cable 13 foot	62.00	**54.95**				■
3385	**PS-60**	HD Power Supply 13V at 22.5 A	519.00	**429.95**		■		
2687	**RC-2000**	Mobile Controller	419.00	**349.95**			■	
3015	**SO-3**	High Stability TCXO	129.00	**119.95**		■		■
0692	**SP-23**	External Speaker	99.00	**89.95**		■	■	■
6039	**SP-990**	External Speaker	299.95	**289.95**	■			
2949	**VGS-1**	Voice Guide Synthesizer/Memory	73.00	**64.95**		■		■
2702	**VS-3**	Voice Synthesizer	44.00	**39.95**			■	
3002	**YF-107C**	500 Hz CW Filter	145.00	**129.95**				■
2981	**YF-107CN**	270 Hz CW Filter	145.00	**129.95**				■
2972	**YF-107SN**	1800 Hz SSB Filter	145.00	**129.95**				■

[1] Requires MJ-88

KENWOOD

RC2000

The optional **Kenwood RC-2000** Mobile Controller kit includes: the control head, DC cable (23 foot), microphone extension cable (16 foot), speaker extension cable (16 foot), RC2000 head cable (16 foot), RC2000 mounting bracket, TS2000/B2000 mounting bracket plus filters for the microphone and speaker lines and hardware.

List $419.00 *Order #2687* **$349.95**

KENWOOD

TM-V71A

The Kenwood **TM-V71A** provides sophisticated, high-powered performance on 2 meters and 440 MHz with 5/10/50 watts on both bands. The controls are logical and feature separate volume/squelch for bands A and B. 1000 Memories can be alpha tagged up to six characters. Other features include: scanning, weather alert, password and cross-band operation. This dual bander has ten dedicated EchoLink® memory channels as well as EchoLink sysop-mode operation.

- 1000 Memories
- Memory Names
- Multi-Scan
- Priority Scan
- DTMF Hand Mic
- Amber/Green LCD
- Auto Power Off
- Time-Out Timer
- Adv. Intercept Pt.
- PL Decode/Encode
- Dimmer
- Packet 1200/9600 Din
- Wideband Rx.
- Hi/Med/Lo RF Out

Kenwood TM-V71A 144/440 MHz 50/10/5W
List $430.00 *Order #0071* **Please Call**

TM-D710A
TM-D710G

The Kenwood **TM-D710A** dual bander allows you to harness APRS, GPS and SSTV technologies to provide world class communications. It has a built-in TNC for a wide range of data communications options including packet. But above, all the TM-D710A is fully equipped to make the most of APRS (Automatic Packet/Position Reporting System). With backlit MC-59 DTMF hand mic.

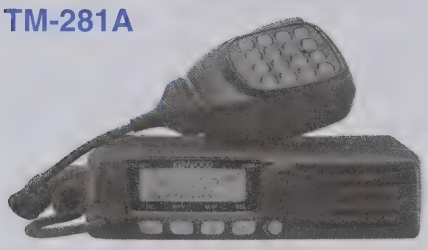
The **TM-D710G** version has a built-in GPS.

- 1000 Memories
- Packet 1200/9600 Din
- DTMF Hand Mic
- Wideband Receiver
- Weather Alert
- Dual Rx VxU VxV UxU
- Remote Head
- PL Decode/Encode
- APRS Ready
- 50/10/5W Out 144/440

Kenwood TM-D710A 144/440 MHz 50/50W
Order #0710 Discontinued

Kenwood TM-D710G 144/440 MHz 50/50W
List $699.00 *Order #0309* **Please Call**

TM-281A



The **TM-281A** provides a big 65 watts output and is built MIL-STD 810 C/D/E/F tough. This radio has NOAA weather built in with alert tone. You get 200 memory channels (or 100 alphanumeric), CTCSS, DCS and 1750 Hz tone burst. It scans: VFO, program, memory, group, call scan, tone scan, CTCSS and DCS. It has Wide/Narrow deviation and automatic repeater offset. With illuminated DTMF mic. 6 5/16 x 1 11/16 x 5 13/32 inches. 2.6 lbs.

- Weather Alert
- 200 Reg Memories or
- Front Speaker
- 100 Alpha Memories
- DTMF Hand Mic
- PL Decode/Encode
- Built-in TCXO
- DCS Decode/Encode
- FM Nar. Ready
- MIL-STD 810 C/D/E/F
- DTMF Hand Mic
- Wide/Narrow Deviation

Kenwood TM-281A 144 MHz 65W
List $203.00 *Order #0281* **Please Call**

KENWOOD

Optional Accessories

Order #	Model	Item Description	List Price	Your Price	TM-281A	TM-D700A	TM-D710A	TM-V71A	TM-V708A
6344	KES-3S	Mobile Speaker	$42.25	$32.95	■	■	■	■	■
4273	KPS-15	Switching Power Supply 23 Amps	144.00	119.95	■	■	■	■	■
2127	MC-59	Lit Hand Mic With DTMF. Modular	51.00	49.95			■	■	
0368	MC-60A	Deluxe Desk Mic. 8 Pin With Preamp[1]	174.00	149.95	■	■	■	■	■
1539	MJ-88	Modular to 8-pin Mic Plug Adapter	35.00	29.95	■	■	■	■	■
2882	PG-2N	DC Power Cable	20.00	18.95	■	■	■	■	■
0303	PG-3B	DC Line Noise Filter	33.00	29.95	■	■	■	■	■
0769	PG-5A	TNC Data Cable	18.00	14.95		■		■	■
0446	KPG-46U	USB PC Interface Cable	60.00	49.95	■				
0678	PG-5F	Extension Cable	77.00	69.95			■	■	
1042	PG-5G	Serial Cable Only	41.00	35.95			■	■	
2670	PG-5H	Data & Serial Cables	64.00	57.95			■	■	
2949	VGS-1	Voice Synthesizer/Recorder/Player	73.00	64.95			■	■	
2702	VS-3	Voice Synthesizer	44.00	39.95		■			■

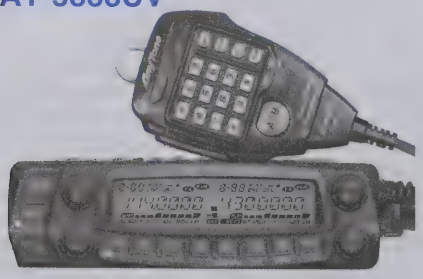
[1]The MC-60A requires the MJ-88 adapter on modular mic jack models.

Skycommand System II+

The TS-2000/2000X/B2000 is equipped for Kenwood's Skycommand System II+. With the TH-D7AG/D72A, TM-D700/710A, you can enjoy HF access remotely. Conventionally two extra transceivers are required for KSS operation — a Commander and a Transporter — but the TS-2000/2000X/B2000 has Transporter functions built in. This means you can operate it remotely with a *single* mobile or handheld unit, such as the TH-D7A/G/D72A or TM-D700A/D710A, transmitting control signals to the Transporter, which also relays your voice to the HF radio. In return, HF signals are transmitted back to the Commander. This system allows you to *remotely* transmit and receive HF signals, set frequencies (with LCD confirmation), switch channels, and more. Enjoy full-duplex operation with access to HF functions such as RIT/XIT, mode switching, split-frequency operations on/off, and memory shift. Control is effected via simple TNC, compatible with the AX.25 protocol.

AnyTone®

AT-5888UV



The **AnyTone AT-5888UV** is a dual band FM mobile transceiver covering 2 meters and 440 MHz. It features dual receive, dual display V/U U/V V/V U/U and crossband repeat. Four power levels are selectable: 5/10/25/50 watts. Receive coverage is from 136-174 and 400-490 MHz. 758 memories are available. FM wide=25 kHz. FM narrow=12.5 kHz. Channel steps: 5, 6.5, 10, 12.5, 15, 20, 25 and 50 kHz. This radio is supplied with USB programming cable, SW5888 programming CD, QMB-01 mobile mounting bracket, QHM-05 DTMF mic, CP-52 remote head cable.

Order #0588 **Please Call**

AT-5888UV OPTIONS

#	Item	Description	Price
5980	CP-52[1]	Head Ext. Cable 9 foot	$5.95
6056	MAGMNTPO	Mobile Mag Mount	10.95
5982	PC-51[1]	USB Programming Cable	18.95
5986	QCC-02	2M/440 PO Mob Ant.	39.95
5984	QDM-01	Desk Mic	47.98
5981	QHM-02	Hand Mic	22.95
2928	QHM-05[1]	DTMF Hand Mic	29.95
5978	QMB-01	Mobile Mounting Bracket	10.95
2813	QMB-03	Head Mounting Bracket	14.95
5985	SP-02	Dual Speakers	34.95
6036	SW5888[1]	Programming CD	4.95

[1]Supplied with radio.

ICOM

ID-5100A

The Icom **ID-5100A** 2m/440 mobile has next generation D-Star capability. Enjoy 50 watts on both bands with VV, UU and DV dual watch. Wideband receive 118-137 [AM], 137-174 and 375-550 MHz. Features include: 1000 memories, 4 call channels, 50 program scan edges, 1200 repeater memories, SD card slot for voice & data storage, D-PRS enhancements, TNC/9600bps modem connectivity, built-in GPS (inside controller) and supplied HM-207 control microphone. Requires optional MBF-4 for mobile mounting.

- D-Star
- SD Card Slot
- 2250 Memories
- Wide Receive
- 3 RF Levels
- DTMF Mic.
- Band Scope
- Cross-band Repeat
- V/V, U/U Receive
- Separate Head
- GPS
- 9600 Packet Port
- PC Programmable
- Encode/Decode

Icom ID-5100A 144 & 440 MHz 50/50 watts
List $899.00 *Order #0551* **Please Call**

IC-2300H

The **IC-2300H** 2 meter FM mobile has a large 4-level backlit LCD that may be set to green, yellow or amber. The receiver covers 136-174 MHz and the transmitter delivers 65, 25, 10 or 5 watts. Improved receive IMD helps provide protection from strong signals such as pager signals. With: 207 alpha memories, 3-way priority watch and independently programmable Rx/Tx and tone squelch. There is an FM narrow mode. With HM133V remote mic. 5.51 x 1.6 x 6.4 inches.

- 207 Memories
- Scanning
- Call Channel
- DTMF Mic.
- Tone Scan
- MIL-STD 810 G
- Large LCD Display
- 136-174 MHz Receive
- 65/25/10/5 W Output
- FM Narrow Mode
- Encode/Decode
- Amber, Yel, Grn LCD

Icom IC-2300H 144-148 MHz 65 watts
List $236.00 *Order #5023* **Please Call**

IC-V8000

The Icom **IC-V8000** delivers a big 75 watts of output and has *Weather Alert* and *Weather Channel Scan* features. 207 alphanumeric memories are supported. The supplied HM-133V remote control mic controls most everything in the palm of your hand. Icom's exclusive Hot Keys let you program the features that you use the most. The bigger backlit keys allow you to operate in low light conditions. 6 x 2 x 6 inches 2.2 lbs.

- 207 Memories
- Scanning
- Call Channel
- DTMF Rem.Mic.
- DTMF Encode
- Diecast Chassis
- Large LCD Display
- Attenuator
- 75 Watt Output
- Die-cast chassis
- PL Encode/Decode
- Weather Alert/Scan

Icom IC-V8000 144-148 MHz 75 watts
List $278.00 *Order #4080* **Please Call**

ID-880H

Enter the world of Digital Radio with the **Icom ID-880H** 2M/440 dual bander. It features D-STAR Digital Voice Capability and supports 20 character short text messaging with on screen display. You get: detachable control head, wideband receive, three power settings, built-in CTCSS decode/encode, RF attenuator, weather alert, DTMF memories, 9600 baud ready, 1750 Hz tone burst, PC compatibility and 1050 alpha memory channels. Power output is 50/15/5 watts on 2 meters and 50/15/5 watts on 440 MHz. The ID-880H includes a built-in duplexer, OPC-600/R separation cable and HM-133 remote hand mic. Requires 13.8 VDC at 12 amps. 5.5 x 1.75 x 7.6" 3 lbs.
List $630.00 *Order #0880* **Please Call**

IC-ID1

The **Icom IC-ID1** 1.2 GHz transceiver is a vital part of a D-STAR system, you won't have to wait for a new repeater to be set-up in your area. This rugged rig works with current analog 1.2GHz repeaters, plus simplex digital operation with another ID1. Frequency range is 1240-1300 MHz, with FM and GMSK (Digital) modulation formats. The ID1 has 105 alphanumeric memory channels, plus full PC control via the USB port. The ID1 supports a 10BASE-T Ethernet cable for the 128K DATA operation! Explore the benefits of wireless high-speed integrated digital connections! Power is 1 or 10 watts. With: RC24 Remote Control head (not shown), SP-22 speaker, HM-118N Hand mic and Windows application CD. 5.7 x 1.6 x 6.6".
List $899.00 *Order #0337* **Please Call**

D-STAR™

D-STAR is an open protocol developed by the Japanese government and by the J. A. R. L. D-STAR radios can talk directly to each other without any intermediate equipment, or through a repeater using D-STAR voice or data transceivers.

The D-STAR system supports two types of digital data streams:

The Digital Voice (DV) stream used on 144 and 440 MHz which contains both digitized voice (3600 bps including error correction) and digital data (1200 bps). Using a DV radio is like having both a packet link and FM voice operating simultaneously.

The Digital Data (DD) stream, used only on 1.2 GHz, is entirely data with a bit rate of 128k bps. The data connection to a radio that uses DV is via an RS-232 interface or USB 1.0. An Ethernet connection is used for high-speed DD D-STAR data.

DISCONTINUED ACCESSORIES

Looking for an older accessory? Our website contains an archive of discontinued models — many with still available optional accessories.
www.universal-radio.com

USED AMATEUR RADIOS

Universal Radio carries previously owned amateur and shortwave radios available at a substantial discount over new. Our used department is also a good source for classic collector models. Our website used list contains the models currently available with photographs of most entries. There is also an informative photo-archive of recently sold used radios. Universal Radio takes most amateur radios in on trade. Additionally we also purchase used radios. Contact Universal if you have a radio you wish to sell or trade.

email: dx@universal-radio.com **website:** www.universal-radio.com

VIEW ACCESSORIES

We do not have room in our catalog to illustrate accessory items but they may be viewed on our website at:
www.universal-radio.com

DISCOVER NOVUS VISA MasterCard

ICOM

Order #	Model	Item Description	List Price	Your Price	IC-2820H	ID-5100A	IC-ID1	IC-V8000	IC-2300H	ID-880H
3191	CSV8000	Win cloning software CD	42.00	31.95				■		
5816	CS2300H	Win cloning software CD	85.00	64.95					■	
4492	CS2820H	Win cloning software CD	45.00	34.95	■					
1160	MB-28H	Mobile Radio Bracket	29.00	27.95					■	
2526	MBA-2	Head Mounting Bracket	40.00	34.95		■				
2650	MBF-1	Suction Cup Mounting Base	85.00	69.95		■				
6307	MBF-4	Mobile Radio Bracket	35.00	28.95		■				
3290	HM-154T	DTMF Cond Hand Mic	90.00	66.95	■		■	■	■	■
3236	OPC-347	DC Cord 23 Ft.	70.00	54.95	■		■	■	■	■
0223	OPC-440	Mic Ext. Cable 16 Ft.	100.00	79.95	■	■	■	■	■	■
2447	OPC-441	Speaker Ext. Cable 16 Ft.	44.00	32.95	■	■		■	■	■
0918	OPC-474	Radio to radio clone cable	20.00	16.95	■			■	■	■
1180	OPC-478	RS232 to radio cable	60.00	44.95	■			■	■	■
4886	OPC-478UC	USB to radio cable	70.00	52.95	■	■		■	■	■
1120	OPC-589	8 Pin to modular mic adptr.	45.00	34.95	■			■	■	■
2990	OPC-1132	DC Cord 9 Ft.	45.00	34.95	■		■	■	■	■
4485	OPC-1156	Front panel cable 11 Ft.	20.00	17.95	■	■				
2489	OPC-1384	Front panel cable 11 Ft.	42.00	31.95						■
4735	OPC-1529R	Serial data cable to PC.	41.00	31.95	■					■
5874	SP-35	Mobile Speaker	77.00	59.95	■		■	■	■	■
4367	UT-108	DTMF Decode Unit	39.00	29.95				■		
6230	UT-133	BlueTooth Unit for VS-3	124.00	99.95		■				
6231	VS-3	Bluetooth ear piece mic	199.00	149.95		■				

YAESU

Order #	Model	Item Description	List Price	Your Price	FT-1900R	FT-2900R	FT-7900R	FT-8800R	FT-8900R	FTM-10R/SR	FTM-400R
5034	AMK-1	Motorcycle Lic Plate Mount	25.00	18.95						■	
3365	BH-2A	Mono Bluetooth Headset[4]	114.00	79.95						■	■
4877	BU-2	Bluetooth Unit for radio	110.00	82.95						■	■
5220	CD-40	Charge Stand BH-2A[3]	30.00	22.95							■
5035	COX-2MM	Coax Cable for YHA-M10	34.00	26.95						■	
0379	CT- 39A	Packet Cable	11.55	9.95			■	■	■		
6089	CT-162	Separation Cable (19.6 feet)	50.00	39.95							■
6108	CT-163	MDIN10PIN to MDIN6PIN+DSUB9PIN	60.00	49.95							■
1188	CT-164	MDIN10PIN to MDIN6PIN	30.00	24.95							■
2559	CT-165	MDIN10PIN to DSUB9PIN	50.00	40.95							■
6102	CT-166	Programming Cable	55.00	43.95							■
2863	CT-167	MDIN10PIN to Bare Wires	30.00	24.95							■
4898	CT-M10	Separation Cable (19.6 feet)	33.00	24.95						■	
4946	CT-M11	Ext. aftermarket headset cable	32.00	23.95						■	
5032	FEP-4	Earphone for BH-1/1A	20.00	16.95						■	
3631	FP-1023	Switching Power Supply 23A	216.88	169.95	■	■	■	■	■	■	■
3640	FP-1030A	Linear Power Supply 30A	345.22	269.95	■	■	■	■	■	■	■
5385	FVS-2	Voice Guide	40.00	29.95							■
5918	HRI-200	WiRES-X™ Internet Interface	125.00	119.95			■	■	■		
0201	MEK-2	Adapter for 8 pin mobile mic	60.00	44.95			■	■	■		
4903	MEK-M10	Microphone adapter jack	15.00	12.95						■	
3647	MH-42C6J	Hand Mic	60.00	44.95	■	■	■	■	■		■
5386	MH-48A6JA	DTMF Hand Mic	70.00	54.95	■	■	■	■	■		■
0138	MH-68A6J	DTMF Hand Mic	63.00	46.95						■	
4883	MH-68B6J	Hand Mic	51.00	29.98						■	
5875	MH-85A11U	Hand Mic with Snap Shot Camera	150.00	119.95							■
3098	MLS-100	Mobile Speaker	62.00	45.95	■	■	■	■	■		
4904	MLS-200M	Weatherproof Speaker	50.00	39.95						■	■
0751	MMB-36	Mobile Bracket	10.00	8.95			■	■	■		
5772	MMB-60	Quick Release Mob Bracket	50.00	39.95			■	■	■		
5614	MMB-98	Vacuum bracket for Control Head	20.00	16.95							■
4944	MMB-M10	Multi-angle Stand Bracket	32.00	23.95						■	
2260	PA-46B	Wall Charger for CD-40	20.00	17.95							■
6272	SCU-23	Mic. Ext. Cable (9.8 feet)	60.00	49.95							■
6419	SMB-201	Cooling Fan Base	70.00	54.95			■	■	■		■
5033	YHA-M10	Mobile Antenna[2]	43.00	34.95						■	
1650	YSK-7800	Separation Kit (19.7 feet)	80.00	59.95			■				
2161	YSK-8900	Separation Kit (19.7 feet)	80.00	59.95				■	■		

[1]Requires BU-2, CAB-1, FEP-4 [2]Requires AMK-1, COX-2MM [3]Requires PA-46B [4]Requires BU-2, CD-40

YAESU

FTM-400DR

- Altitude Display
- Band Scope
- C4FM/FDMA
- V+U/V+V/U+U
- APRS
- TOT & APO
- 3.5" TFT Color Display
- 500 Memories/Band
- CTCSS Encode/Decode
- Clock - Calendar
- Image RX/TX
- Dual Reception

The **Yaesu FTM-400DR** 2 meter/440 dual band mobile transceiver that provides four modes:

✔ **V/D** mode is voice and data communication in the same time frame. Stable and reliable digital voice *and* data communications are maintained using very strong error correction capabilities.

✔ **Voice FR** mode uses the full data rate for voice data to transfer clear, high quality voice data.

✔ **Data FR** mode uses the full data rate for transferring large amounts of data, text messages, images and voice memo data at twice the speed of V/D mode.

✔ **Analog FM** mode is effective when weak signal strength causes audio drop-out in the digital mode and enables communication up to the borderline of the noise level.

During receive, the *Automatic Mode Select* function identifies and selects the mode automatically! Power is selectable at 50, 20 or 5 watts on either band. Enjoy very wideband receive from 108-470 and 800-999 MHz (less cellular). Four scan modes are supported: VFO, Memory, Programmable Memory or Selected Memory. 500 Memories per band are available. Each memory can store: frequency, mode, tag, repeater information, tone, DCS, antenna squelch information, memory skip information and transmission output. The screen background may be set to any of 5 colors (green, blue, orange, purple or gray). The FTM-400DR can capture images and video by connecting a USB camera (not supplied) and transmit and receive them. There is a microSD card port. This radio comes: MH-48A6JA DTMF hand mic, mounting bracket, bracket for controller, 9.8 foot control cable, SCU-20 PC cable, stereo to monaural plug, DC cord and owner's manual.

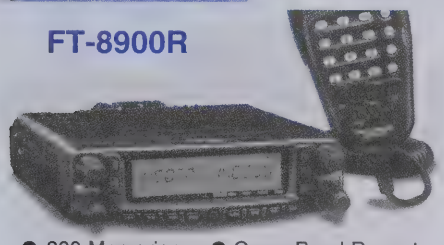
List $850.00 *Order #5400* **Please Call**

YAESU ARTS™

Yaesu's exclusive ARTS™ feature can be critically important in search-and-rescue applications. ARTS provides a "hand-shake" with other ARTS equipped transceivers, and the display indicates if an *Out of Range* condition exists. The base station (typically a mobile like the FT-8900R) can then alert the field unit to move to a better location. A six character CW ID memory is also provided for Morse code identification of your station every ten minutes during ARTS operation.

YAESU

FT-8900R



- 800 Memories
- Six Scan Modes
- ARTS™
- V+U/V+V/U+U
- Cross-Band Repeat
- Backlit DTMF Mic.
- CTCSS Encode/Decode
- Packet Ready

The **Yaesu FT-8900R** quad bander gives you incredible power and flexibility on the road. Operate 10 meters, 6 meters, 2 meters and 70cm. High power output is featured with 50 watts on 10, 6 and 2 meters and 35 watts on 430 MHz. It is like having two radios in one with dedicated Volume and Squelch controls on each side. Include: cross-band repeat, duplexer and CTCSS/DCS Encode/Decode. WiRES™ compatible. Includes MH-48A6J DTMF hand mic. 5.5 x 1.6 x 6.6" 2.2 lbs.
List $680.00 *Order #0890* **Please Call**

FT-2900R

- 200 Memories
- Smart Search™
- Packet Ready
- DTMF Memories
- CTCSS Encode
- CTCSS Decode
- 75 Watts Output
- Weather Alert

The **Yaesu FT-2900R** makes high power 2M operation affordable. CTCSS/DCS encode/decode is built-in. Four power levels are available: 75, 30, 10 and 5 watts. Receive coverage is 134-174 MHz. Direct keypad entry is available via the supplied MH-48A6J backlit DTMF remote mic with four programmable keys. Other supplied items include: MMB-83 mobile bracket, DC power cord, spare 15A fuse and base feet. The fanless FT-2900R is built MIL-STD 810 tough. 6.3 x 2 x 7.3".
List $250.00 *Order #2900* **Please Call**

FT-7900R

- 1055 Memories
- ARTS™
- Packet Ready
- DTMF Memories
- PL Encode/Decode
- DCS Encode/Decode
- Backlit DTMF Mic
- Five Hyper Memories

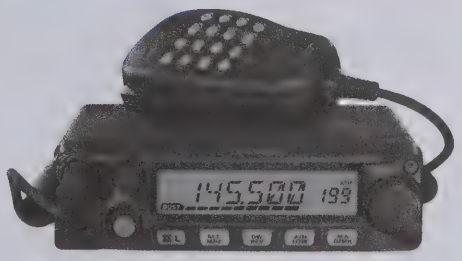
The **Yaesu FT-7900R** provides 50 watts on 2 meters and 45 watts on 430 MHz. The well designed front panel provides simple, safe operation. Features include: over 1000 memories, Packet 1200/9600 jack, extended receive 108 to 520 and 700-990 MHz (less cellular). It is WiRES and ARTS™ compatible. The FT-7900R comes with a MMB-36 mobile mounting bracket, DC cord and MH-48A6J Up-Down, illuminated MH-48A6J DTMF hand mic. 5.5 x 1.6 x 6.6" 2.2 lbs.
List $450.00 *Order #0790* **Please Call**

FT-8800R

- 1000 Memories
- Six Scan Modes
- Dual LCD
- V+U/V+V/U+U
- Cross-Band Repeat
- Backlit DTMF Mic.
- CTCSS Encode/Decode
- Packet Ready

The **Yaesu FT-8800R** operates on 2 meters and 430 MHz with 50 watts on 2 m and 35 watts on 430 MHz. You get dedicated Volume and Squelch controls on each side and a huge dual band backlit LCD display. Built in features include: duplexer and CTCSS/DCS Encode/Decode, over 1000 memories, WiRES/ARTS™ compatible. Comes with a mounting bracket, DC cord and MH-48A6J Up-Down, illuminated DTMF microphone. 5.5 x 1.6 x 6.6 inches 2.2 lbs.
List $620.00 *Order #0080* **Please Call**

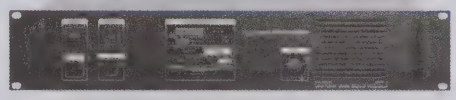
FT-1900R



- 221 Memories
- Wires™
- NOAA Weather
- DTMF Memories
- CTCSS Encode
- CTCSS Decode
- 55 Watts Output
- Weather Alert

The **Yaesu FT-1900R** provides Yaesu's legendary mechanical toughness in a low-cost, high-performance, 2-meter FM transceiver. It has strong receiver performance, covering 136 to 174 MHz. It has illuminated front panel keys and boasts 221 memories. You get CTCSS and DCS Encoder and Decoder circuits. The FT-1900R is similar to the famous FT-1802M, but adds a *Memory Only* mode and provides 5 more watts. 5.6 x 1.6 x 5.8 inches 2.6 lbs.
List $220.00 *Order #1900* **Please Call**

YAESU DR-1X



The **Yaesu DR-1X** is a full featured C4FM/FM dual band repeater/base station. And unlike many other repeaters, the DR-1 handles conventional FM and C4FM digital transmission. The Yaesu System Fusion technology features the AMS-Automatic Mode Select function that instantly recognizes whether the signal is C4FM digital or conventional FM and automatically switches to match the received mode.
List $1800.00 *Order #6143* **Please Call**

SPECIFICATIONS

Receive Frequency	144-148, 430-450 MHz
Transmit Frequency	144-148, 430-450 MHz
Modes	C4FM, FM
Tx Power	50 / 25 /10 watts
Sensitivity	0.45uV Digital 0.3uV FM
Audio Output	3W 8 ohm 10% THD
Size	19 x 3.5 x 15"
Weight	22 lbs.

ADMS SOFTWARE

Programming your new Yaesu mobile is a breeze with Yaesu's ADMS software (Windows 2000/XP/Vista) CD and included USB cable.

#	Item	For Radio	Price
3519	**ADMS2H**	FT-8900R	$37.95
2095	**ADMS2I**	FT-8800R	37.95
5080	**ADMS2J**	FT-2800M	37.95
5294	**ADMS1802**	FT-1802M	37.95
1424	**ADMS1900**	FT-1900R	37.95
1436	**ADMS2900**	FT-2900R	37.95
1452	**ADMS7900**	FT-7900R	37.95
5475	**ADMS350**	FTM-350R/AR	37.95

WOUXUN®

KG-UV920P

- 999 Memories
- Dual Receive
- Extended Rx
- DTMF Memories
- PL Encode/Decode
- DCS Encode/Decode
- Backlit DTMF Mic
- Cross Band Repeat

The **Wouxun KG-UV920P** is a dual band FM mobile transceiver covering 2 meters and 440 MHz. Three power levels are selectable: 5/25/50W on 2 meters, and 5/20/40W on 440. Enjoy expanded receive coverage from 0.15-30, 65-220 and 400-520 MHz. Detachable head.
List $349.95 *Order #0920* **Please Call**

ALINCO

DX-10T

The **Alinco DX-10T** is a capable, compact 10 meter LSB, USB, AM, FM, CW amateur transceive covering 28 - 29.7 MHz. Power output is adjustable 0-25W SSB and 1-12W FM/AM/CW. This radio does not have a VFO, so frequencies may be stored in the expansive memory system and then adjusted by the fine tuning. The meter displays S/RF, SWR or DC voltage. Scanning is supported. The radio features SWR and power supply voltage protection. Tuning steps may be set to 10 Hz, 100 Hz, 1 kHz or 10 kHz. This radio requires 13.8VDC at 6 amps. The DX-10 includes the EMS-70 Hand Mic (with metal plug), mobile bracket, DC cord and mounting hardware.
List $299.95 *Order #6361* **$249.95**

DR-638T

The **Alinco DR-638T** is a dual-band VHF/UHF commercial transceiver with full duplex and cross-band repeat. Transmit is: 136-174 and 400-480 MHz. Receive is: 108-180 MHz (AM/FM), 220-260, 400-532 and 350-400 MHz (FM). Power is VHF 50/25/10/5W & UHF 40/25/10/5W. Features include: CTCSS, DCS, Tone-Burst Tones, DCS/Tone Scan, 758 channels, backlit 6 character variable color alphanumeric display, removable control head and illuminated DTMF mic with direct frequency entry and remote control. With mounting bracket, spare fuse, mic hanger, manual and DC power cord.
List $399.95 *Order #0638* **Please Call**

ALINCO

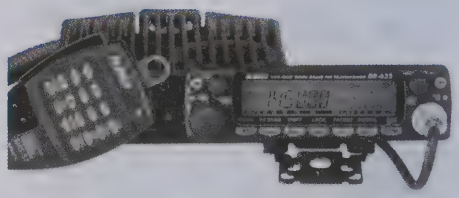
DR-03T

The **Alinco DR-03T** is a capable, compact 10 meter 10 watt FM transceiver capable of true DX operation when propagation permits. The easy and smooth operation of the DR-03T is inherited from the popular DR135/235/435 series such as a large alphanumeric display, remote control from the multifunctional back-lit microphone, excellent transmit/receive audio and clean key layout of the control panel. Features like 100 alphanumeric memories, 39 CTCSS and DCS encode/decode, 3 output level (10/5/1~4 watts) settings, theft alarm, cable-clone and much more are all standard in the DR-03T. The receive range is 28-29.695 MHz (FM). 5.58 x 1.61 x 6.83 inches.
List $357.95 *Order #2607* **$229.95**

DR-06T

The **Alinco DR-06T** gets you on the six meter *Magic Band* with a full 50 watts. Enjoy the large alphanumeric display, remote control from the multifunctional backlit microphone, excellent transmit/receive audio and clean key layout of the control panel. Features like 100 alphanumeric memories, 39 CTCSS and DCS encode/decode, 3 output level (50/25/5 watts) settings, theft alarm, cable-clone and much more are all standard in the DR-06T. Enter the digital age with the optional EJ-47U digital voice unit. There is also an optional EJ-41U internal Packet TNC board (1200/9600). Frequency range is 50-53.995 MHz (FM). 5.58 x 1.61 x 6.83 inches 2.2 lbs.
List $279.95 *Order #5025* **$239.95**

DR-635T



- 200 Memories
- Encode/Decode
- Remotable Head
- Air Band Receive
- Cross-Band Repeat
- FM 88-108 MHz Rx.
- Optional TNC Board
- Optional Digital Voice

The **Alinco DR-635T** transmits from 144 to 147.995 and 430 to 449.995 MHz. Receive is 108 to 173.995 and 335 to 480 MHz. Includes 200 alphanumeric memories. Power output is VHF 50/20/5W and UHF 35/20/5W. Dual band receiver with V/V, U/U, V/U and U/V capability. With EMS-57 hand mic. Order optional EDS9 *#3025* to remote the head up to 16 feet (shown above).
List $319.95 *Order #2635* **Please Call**

DR-135/235 Series

- 100 Memories
- VFO Scanning
- Optional TNC
- Air Band Rx.
- 10 Autodial Memories
- GPS Input
- Encode/Decode
- DTMF Microphone

The **Alinco DR-135** series features 2 Meter 50/10/5 watt FM output with a 7 character alphanumeric display, 100 memories, aircraft (AM) plus extended receive. CTCSS encode/decode is standard. Includes backlit DTMF mic and DC cord. 5.6 x 1.7 x 6.1". Available with or without the optional EJ-41U Packet TNC installed. Black.

DR-135TMkIII 144-148 MHz 50 watts
List $185.00 *Order #1980* **$169.95**

DR-135TPMkIII with EJ-41U Packet TNC installed
List $265.00 *Order #4236* **$239.95**

DR-235TMkIII 220MHz 25 watts (no EJ-41U)
List $249.00 *Order #4336* **$229.95**

DR-135/235/635 OPTIONS

#	Item	Description	Price
3025	**EDS-9**	Head Exten. DR-635	$44.95
2027	**EJ-47U**	Digital Voice Unit	199.95
2014	**EJ-41U**	Packet TNC DR-135	139.95
2763	**EJ-50U**	Packet TNC DR-635	144.95
3489	**EMS-14**	Electret Desk Mic	119.95
1354	**EMS-57**	Electret Hand Mic	61.95
0069	**MB-130**	Extra Mobile Bracket	20.95
1701	**PC-15B**	Extra DC power cord	12.95

JETSTREAM

JT222M

The **Jetstream JT222M** is with 50/25/10 watts and 200 memory channels. The receive range is 216.000-280.000 MHz and transmit range is 222.000-224.995 MHz. CTCSS/DTS Encode/Decode is built-in plus tone burst. Other features include a time-out timer, auto power off. Both memory scan and band scan are available. Supplied with backlit DTMF hand mic. This radio requires 13.8 VDC at 9 amps. 5.7W X 1.85H x 7.5D inches 2.7 pounds.
List $209.95 *Order #6298* **Please Call**

UNIVERSAL BUYS RADIOS

Call, email or write and tell us what you have to sell. We can provide a quote, subject to inspection.

KENWOOD

TH-F6A

- LCD Dot Matrix Display
- 435 Memories (3 Call)
- Alphanumeric Memory
- Encode/Decode
- Wideband Receive
- CW/SSB Rx on HF
- Double Band Scan
- Dual Freq. Receive

The **Kenwood TH-F6A** transmits in the 144, 220 and 440 MHz amateur bands and has dual channel receive capability. Enjoy 5 watts out with the supplied 7.4 volt 2000 mAh lithium-ion battery (or external 13.8 VDC power). A low power setting of 0.5 watts and an extra low power output of 0.05 watts is featured. The controls are easy to use and the LCD informs you of the exact status of the radio. This radio offers sophisticated wideband communications reception. The special "B" band has reception from 100 kHz to 1300 MHz (less restricted freqs) in FM/AM/CW/SSB. Yes, this HT has the ability to decode SSB and CW on HF! Built to MIL-STD-810 C/D/E standards. This HT includes the PB-42L 7.4 VDC 2000 mAh Lithium Ion battery, 120 VAC adapter, belt clip and single high-performance SMA antenna. 2.3 x 3.5 x 1.3 inches 9 oz (58x87x30mm 250g).

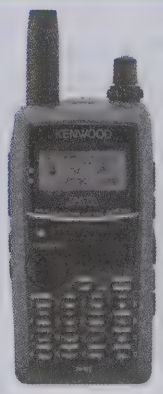
List $404.00 *Order #0066* **Please Call**

TH-K20A

- Auto Repeater Offset
- Built-in CTCSS/DCS
- Weather Alert
- Multi Scanning Modes
- Backlit Keypad
- 200 Memories
- Battery Saver Circuit
- Narrow FM Ready

The **Kenwood TH-K20A** is a rugged 5.5 watt, 2 meter HT with straightforward operation. It has a large backlit LCD, backlit keys and Weather Alert. Receive coverage is 136-174 MHz. You get 200 regular or 50 alpha memories. Enjoy simple repeater operation with auto repeater offset and automatic simplex checker. Scan types include: CTCSS, DCS and 1750 Hz tone burst. Other features include: Auto power off, time out timer, memory channel transfer and wide/narrow deviation. Everyday functions are preprogrammed into 11 keys with an additional PF key that can be assigned with a custom function. Three output levels (5.5/2.5/1 watts) are available for extended battery life. MIL-STD-810 C/D/E/F. KNB-63L Li-ion 1130 mAh, KSC-35S drop-in charger, and English/Spanish/French printed manual.

List $169.95 *Order #3020* **Please Call**



TH-D72A

- Built in TNC 1200/9600
- Built in GPS
- 1000 Alpha Memories
- Encode/Decode
- Wideband Receive
- LCD Dot Matrix Display
- Nine Scan Modes
- Clock/Date Function

The **Kenwood TH-D72A** *Data Communicator* has an integrated GPS receiver *and* built-in TNC (1200/9600) to provide superior APRS® operation. And the TH-D72A can employed as part of Kenwood's *Skycommand System II+* when used with the TS-2000 series. The TH-D72A also offers EchoLink® memory compatibility and a mini-USB connector. Other features include: 1000 alpha memories, 9 scan modes, CTCSS/DCS, cross-tone, waypoint export, DX cluster tune, clock (date/time), band mask, call channel, monitor, auto power-off, MHz mode, shift, VOX, auto repeater offset, simplex checker and ten DTMF memories. It is MIL-STD810 and IP54 weatherproof. The TH-D72A can be a stand-alone Digipeater and even function as an iGate when properly connected! Includes antenna, battery, charger, USB interface cable, printed and CD Owner's Manual.

List $512.00 *Order #3072* **Please Call**

KENWOOD Optional Accessories

#	Model	Item Description	List Price	Your Price	TH-F6A	TH-K2AT	TH-K20A	TH-D72A
3459	**BT-14**	Battery Case 6 x Alkaline AA Cells	$22.00	**$19.95**		■		
4373	**BT-13**	Battery Case 4 x Alkaline AA Cells	28.00	**24.95**	■			
5413	**BT-15**	Battery Case 6 x Alkaline AAA Cells	38.00	**28.95**				■
5596	**BT-16**	Battery Case 6 x Alkaline AAA Cells	24.00	**19.95**			■	
5427	**KHS-22**	Single ear, behind-the-head PTT boomset	36.00	**31.95**	■	■	■	■
3054	**KHS-26**	Earbud Clip Microphone	25.00	**22.95**	■	■	■	■
0537	**KNB-63L**	Li-Ion Battery 7.4 VDC 1130 mAh	34.00	**30.95**			■	
3498	**KSC-24**	Rapid Desk Charger	51.00	**46.95**		■		
5343	**KSC-32**	Rapid Desk Charger	70.00	**52.95**				■
3697	**PB-39**	NiCd Battery 9 VDC 600 mAh	62.35	**54.95**				■
5330	**PB-42L**	Li-Ion Battery 7.4 VDC 2000 mAh	88.00	**79.95**	■			
3484	**PB-43N**	NiMH Battery 7.4 VDC 1100 mAh	49.00	**44.95**		■		
5273	**PB-45L**	Li-Ion Battery 7.4 VDC 1800 mAh	99.00	**74.95**				■
1798	**PG-2W**	DC Cable	20.00	**17.95**	■	■		■
1280	**PG-3J**	Filtered Cigar Lighter Cord	41.00	**36.95**	■	■		■
3471	**PG-4Y**	PC Serial Cable [DB9]	35.00	**31.95**	■	■	■	
4384	**SC-51**	Soft Case TH-F6A	17.00	**15.95**	■			
3464	**SC-54**	Soft Case TH-K2AT	17.00	**15.95**		■		
5638	**SC-55**	Soft Case TH-D72	22.00	**16.95**				■
2459	**SMC-32**	Mini Speaker Microphone	58.00	**52.95**	■	■	■	■
2737	**SMC-33**	Speaker Mic with Remote	73.00	**64.95**	■	■	■	■
1172	**SMC-34**	Speaker Mic with Remote	35.00	**31.95**	■	■	■	■

BAOFENG UV-3R

We no longer carry the **Baofeng UV-3R** but we still have some accessories available.

UV3R Accessories

#	Model	Item Description	Price
5935	**BL3**	Li-ion 3.7V 1500 mAh	**$8.98**
2469	**SPKR MIC 3**	Speaker Mic (1 pin)	**9.98**
2894	**USB03**	USB Program Cable	**9.98**
5939	**CASE3-RED**	Case Frame- Red	**3.98**
5940	**CASE3-BLUE**	Case Frame- Blue	**3.98**
5941	**CASE3-YEL**	Case Frame- Yellow	**3.98**
5942	**CASE3-CAMO**	Case Frame- Camo	**3.98**

BAOFENG UV-5R

We no longer carry the **Baofeng UV-5R** but we still have some accessories available.

UV5R Accessories

#	Model	Item Description	Price
2518	**AC ADP 5**	AC Adapter	**$4.98**
5973	**ANT5S**	Short Antenna 4.8"	**8.98**
5873	**BL5**	Li-ion 7.4V 1800 mAh	**19.95**
5894	**EAR MIC**	Ear Mic	**9.95**

[1]For UV-5R only (*not* for A or C versions).

VIEW ACCESSORIES

We do not have room in our catalog to illustrate accessory items but they may be viewed on our website at: **www.universal-radio.com**

NEED A PRICE?

The price of amateur radio gear is constantly changing as a result of coupons and promotions. For current pricing please visit our website at: **www.universal-radio.com** or call toll-free: **1 800 431-3939**

Are you a collector looking for an older radio model?

Please visit our used equipment department at: **www.universal-radio.com**

ICOM

ID-51A

- GPS Receiver
- 1304 Memories
- Auto Position Reply
- Voice Memory
- DTMF Keypad
- Micro SD Card Slot
- IPX7 Construction
- AM & FM Broadcast
- D-STAR DV

The **Icom ID-51A** may be the most hi-tech dual band HT in the world. It covers 2 meters and 440 MHz and receives two bands simultaneously (V/V, U/U & V/U). It is IPX7 waterproof and features a built-in GPS! The 128x104 dot-matrix display is impressive. This radio has an astounding 1304 alphanumeric memories. There is a Micro SD card slot for an optional memory card. This can be used to store DVR Incoming/Outgoing Messages, GPS Log and Memory Backup. There is built-in CTCSS/DTCS encode/decode for analog FM. It even features an independent AM and FM broadcast receiver. A new Voice Memory feature records incoming and outgoing calls and can be used as a voice recorder. With BP-271 battery, SMA antenna, belt clip, strap and BC-167SA wall charger. 2.3 x 4.2 x 1.1 inches 9 oz.

List $729.00 *Order #0051* **Please Call**

ICOM

ID-51A 50TH Anniversary Edition

The limited production **Icom ID-51A** *Anniversary Edition* retains all the regular ID-51A features but adds new features and capabilities:

- ✔ Faster Data transfer in DV mode
- ✔ RS-MS1A Android™ Application (optional OPC-2350LU cable required)
- ✔ Additional long antenna for better receive
- ✔ Additional Dplus reflector link commands
- ✔ DV and FM repeater search functions
- ✔ Enhanced D-PRS functions

This special enhanced version is offered in five different trim colors.

Light Blue	*Order #6370*	**Please Call**
Light Green	*Order #6371*	**Please Call**
Red	*Order #6372*	**Please Call**
White	*Order #6365*	**Please Call**
Black	*Order #6366*	**Please Call**

ID-31A

- D-STAR built-in
- GPS built-in
- 1252 Memories
- External DC Jack
- 420-450 MHz
- 5/2.5/0.5/0.1 Watts
- Micro SD Slot
- Encode/Decode
- IPX7 Standard

The **Icom ID-31A** lets you operate in the D-STAR mode from a very compact handheld! This 440 MHz HT also supports conventional FM comms. The transmit range is 420 to 450 MHz and the receive range is 400 to 479 MHz in FM, FM-N and DV modes. It is IPX7 waterproof and features a built-in GPS! It has a huge 1252 alphanumeric memory system featuring, 500 Regular, 700 D-STAR Repeater Memories, 50 Scan Edges and 2 Call Channels. There is a Micro SD card slot for an optional memory card. This can be used to store DVR Incoming/Outgoing Messages, GPS Log and Memory Backup. There is built-in CTCSS/DTCS encode/decode for analog FM. Four RF levels: 5, 2.5, 0.5, 0.1 watts. The ID-31A comes with the BP-271 battery, FAS270C SMA flexible antenna, MB-127 belt clip and BC-167 wall charger. It also includes the CS-31 cloning software (requires OPC-2218LU cable).

List $391.00 *Order #2031* **Please Call**

IC-V80 HD & IC-V80 Sport

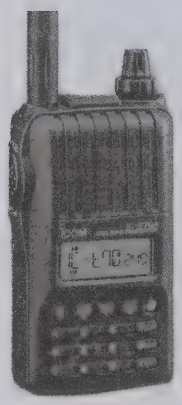
- Rugged Construction
- Simple Operation
- Three RF Levels
- Backlit LCD
- DTMF Keypad
- Battery Saver
- Encode/Decode
- 207 Alpha Memories
- 16 DTMF Memories

The **Icom IC-V80** ***Sport*** 2 meter handitalkie features military grade IP54 MIL-STD 810 rugged construction, internal VOX function, CTCSS/DTCS encode/decode with tone scan and 5.5/2.5/0.5 watts out. Enjoy 207 alphanumeric memories and 3 scan modes. Also 16 DTMF memory channels, wide-narrow channel spacing, with 750 mW of audio, backlit alpha display, weather channel alert (USA version), keypad, repeater lock-out, auto-repeater function, time-out timer and auto power off. The **IC-V80** ***Sport*** comes with BP-263 AA cell holder and BNC flexible antenna.

List $124.00 *Order #0580* **$99.95**

The **Icom IC-V80-35** ***HD*** version comes with BC-193 fast Li-ion desk charger, BP-265 Li-ion battery (7.4 VDC 1900 mAh) and BNC flexible antenna.

List $199.00 *Order #0280* **$149.95**



IC-T70A HD IC-T70A Sport

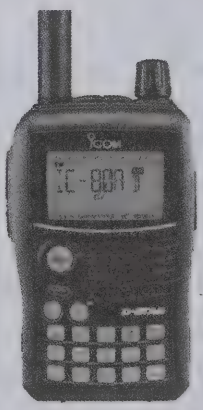
- Three RF Levels
- Auto Repeater
- DTMF Keypad
- Battery Saver
- 302 Memories
- Simple Operation
- Encode/Decode

The **Icom IC-T70AHD** 2M/440 HT features military grade rugged construction (IP54 and MIL-STD-810), internal VOX function, CTCSS/DTCS encode/decode and 5.0/2.5/0.5 watts out on both bands. Receive coverage is 136-174 and 400-479 MHz. Enjoy 302 alphanumeric memories and multiple scan modes. Also DTMF memory channels, wide-narrow channel spacing, with 700 mW of audio, backlit alpha display, weather channel alert, keypad, repeater lock-out, auto-repeater function, VOX time-out timer and auto power off. The IC-T70AHD comes with BC-193 Li-ion drop-in tray, BC-123SA AC Adapter, BP-265 Li-ion Battery Pack (7.4VDC 1900 mAh), belt clip and flexible SMA antenna. 2.35 x 4.4 x 1.2" 13.4 oz.

List $296.00 *Order #4070* **Please Call**

Sport version (no Li-ion battery or charger)

List $236.00 *Order #3007* **Please Call**



IC-80AD

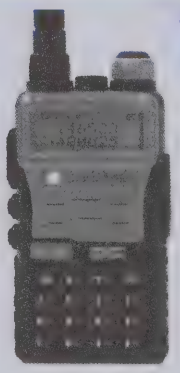
- 1052 Alpha Memories
- Wideband Receive
- Encode/Decode
- D-STAR built in
- Ext. 12 VDC Input
- Four RF Levels
- Attenuator
- Power Save
- 16 DTMF Memories

The **Icom IC-80AD** provides 2 meter/440 MHz dual band capabilities (one band at a time) via a simple band switching system. D-STAR is built-in! Power output is up to 5 watts on each band. Four power levels are available: 5, 2.5, 0.5 or 0.1 watts. The controls are easy to use. 1052 memory channels are available. Multiple scanning modes are supported. A large, informative back-lit display is featured. Built-in CTCSS and DTCS tones are used for accessing a closed repeater or tone squelch operation. When used with the optional HM-189GPS speaker-microphone, the IC-80AD shows your position data on the display and offers a position reporting function in DV mode. This radio comes with SMA antenna, belt clip, BP-217 lithium ion battery, BC-167A charger and wrist strap. 2.3 x 4.1 x 1.4 inches (59x103x35mm).

Order #5180 Discontinued

ICOM Optional Accessories

Order#	Model	Item Description	List Price	Your Price	IC-80AD	IC-91A	IC-92AD	IC-T70A	IC-P7A	IC-T90A	IC-V80	ID-31A	ID-51A
5334	BC167SA	Wall Charger	35.00	25.95						■			■
5072	BC177	Drop in Charger	90.00	66.95			■						
4313	BC139	Drop in Charger	123.00	94.95	■	■				■			
5371	BC192	Drop in Slow Charger[7]	36.00	26.95				■			■		
2153	BC191	Drop in Rapid Charger[7]	72.00	54.95				■			■		
1680	BC193	Drop in Rapid Charger[8]	72.00	51.95				■			■		
5833	BC202	Drop in Rapid Charger	70.00	54.95								■	■
3130	BP-210N	NiMH 7.2V 1650 mAh	75.00	54.95									
4311	BP-216	Battery Case (2xAA)	48.00	34.95	■	■				■			
4312	BP-217	Li-Ion 7.4V 1300 mAh	125.00	89.95	■	■				■			
3189	BP-222N	NiCd 7.2V 600 mAh	45.00	34.95									
5081	BP-256	Li-Ion 7.4V 1620 mAh	115.00	89.95			■						
5078	BP-257	Battery Case (2xAA)	48.00	34.95			■						
5389	BP-263	Battery Case (6xAA)	30.00	22.95				■			■		
2079	BP-264	NiMH 7.2V 1400 mAh	43.00	31.95				■			■		
0939	BP-265	Li-Ion 7.2V 1900 mAh	62.00	46.95				■			■		
5818	BP-271	Li-Ion 7.4V 1150 mAh	99.00	69.95								■	■
1387	BP-272	Li-Ion 7.4V 1880 mAh	139.00	99.95								■	■
2091	BP-273	Battery Case (3xAA)	68.00	49.95								■	■
3150	CP-12L	Cigar Plug Filter	43.00	31.95	■	■	■					■	■
4423	CP-17L	Cigar Plug BC146192/193	30.00	24.95				■			■		
4578	CP-19R	Cigar Plug Filter	52.00	39.95	■	■	■			■		■	■
2744	CP-21LR	Cigar Plug for BC146	62.00	19.98					■				
4855	CS-T70	Windows Software CD[1]	50.00	36.95				■					
4314	CS-T90A	Windows Software CD[1]	42.00	32.95						■			
1165	HM-46	Compact Speaker Mic	60.00	44.95						■			
3429	HM-75A	Remote Speaker Mic	95.00	69.95	■	■	■[6]			■			
5824	HM-75LS	Remote Speaker Mic	99.00	72.95								■	■
0564	HM-128	Earphone Mic	30.00	23.95		■			■[3]	■			
0000	HM-131	Remote Speaker Mic	Discontinued		■	■	■[6]		■[3]	■			
1769	HM-153	Earphone Mic	109.00	79.98			■[6]		■[3]				
4808	HM-153L	Earphone Mic	120.00	89.95							■		
0731	HM-153LS	Earphone Mic	175.00	129.95								■	■
2884	HM-158L	Remote Speaker Mic	47.00	34.95							■		
3188	HM-159L	Remote Speaker Mic	77.00	59.95							■		
1475	HM-166LS	Remote Speaker Mic	99.00	73.95								■	■
1498	HM-174	Submersible Speaker Mic	165.00	119.95			■						
0000	HM-175GPS	Submersible GPS Mic	Discontinued				■						
0253	HM-186LS	Remote Speaker Mic	65.00	49.95								■	■
1187	HM-189GPS	GPS Speaker Mic	325.00	219.98	■								
0893	HS-85	Headset with VOX/PTT	145.00	104.95	■	■	■[4]			■			
4450	HS-94	Earpiece Headset[5]	25.00	19.95				■[10]		■	■[9]	■[11]	■[11]
4451	HS-95	Neck Arm Headset[5]	215.00	159.95				■[10]		■	■[9]	■[11]	■[11]
4049	HS-97	Throat Mic[5]	42.00	32.95				■[10]		■	■[9]	■[11]	■[11]
0000	LC-152a	Vinyl Carry Case	Discontinued							■			
0000	LC-163	Vinyl Carry Case	Discontinued		■	■							
5071	LC-168	Vinyl Carry Case	35.00	24.95			■						
5438	LC-174	Vinyl Carry Case	45.00	32.95				■					
5822	LC-178	Vinyl Carry Case	45.00	34.95								■	
5916	LC-179	Vinyl Carry Case	35.00	26.95									■
1666	OPC-254L	DC Fused Cord	20.00	14.95	■	■	■	■				■	■
0918	OPC-474	Radio to radio clone cable	20.00	16.95	■	■	■	■	■	■			
1180	OPC-478	PC to radio RS232 cable	60.00	44.95					■	■			
4886	OPC-478UC	PC to radio USB cable[2]	70.00	52.95	■			■	■	■			
4424	OPC-515L	DC Cbl. BC-191/192/193	26.00	20.95				■			■		
4735	OPC-1529R	Serial PC/GPS Cable	41.00	31.95	■	■							
5076	OPC-1797	Plug Adapter Cable	60.00	44.95			■						
5430	OPC-2004	Headset interface cable	30.00	22.95							■		
5437	OPC-2006	Headset interface cable	25.00	19.95				■					
0288	OPC-2006LS	Headset interface cable	35.00	26.95								■	■
5821	OPC-2218LU	DV USB Data & Prgm.	75.00	54.95									■
5077	RS-92	Windows CD and Cable	110.00	79.95			■						
1086	SJ-1	Silicon Jacket Case	35.00	27.95									■
0940	SP-13	Mono Earphone	5.00	4.95	■	■	■[6]	■	■[3]	■		■	■
3209	SP-27	Mono Earphone	35.00	26.95		■	■[6]	■	■[3]	■			
4740	UT-121	D-Star Unit for 91A	229.00	169.95		■							
4448	VS-1	VOX/PTT Unit[4]	44.00	33.95						■			



TDXONE TD-Q8A

- 4W VHF/4W UHF
- Li-ion Battery
- Wide/Narrow BW
- DTMF Keypad
- Dual Display
- 128 Memories
- Voice Guide
- Encode/Decode

The **TDXONE TD-Q8A HT** is a compact hand held transceiver providing 4 watts in the frequency range of 144-148 and 430-450 MHz transmit (136-174 MHz and 400-520 MHz receive). It features 128 memories, simple controls, High/Low power, time-out timer, lock, English/Chinese voice prompt, VOX, CTCSS encode, 1750 Hz burst, dual band display, battery saver, LED flashlight, low battery alert and FM broadcast band reception. It will fit in your shirt pocket with room to spare at only 2.25 x 4.35 x 1.3" 7 ounces. The TD-Q8 comes with Li-ion battery, charge tray, AC charger, standard SMA antenna, manual and belt clip. Free programming download on Universal website.

Order #6008 **$59.95**

TD-Q8/A Accessories

#	Model	Item Description	Price
6059	SPKR MIC8	Speaker Mic (2 pin)	$19.95
6084	USBCABLE8	USB Program Cable	19.95
6092	MSC20A	Carry Case	19.95
3259	DC-Q8	Li-ion 7V 1800mAh	19.95

HT GO BAGS

These insulated bags are great for creating an *Emergency Go Bag* for your HT or scanner. There is plenty of room for your radio, batteries, accessories, *Repeater Directory* and more. The top is zippered and it has a carry strap plus a pocket on the front panel. 8 x 6 x 5" These bags are *not* made by Icom, Kenwood or Yaesu.

Icom Logo - Blue	*Order #5832*	**$9.95**
Kenwood Logo - Green	*Order #5662*	**$9.95**
Yaesu Logo - Orange	*Order #5883*	**$7.95**
Universal Logo - Blue	*Order #5733*	**$7.95**

Icom Optional Accessories Footnotes

[1] Requires OPC-478
[2] With Windows drivers CD
[3] Requires OPC-782
[4] Requires HS94, 95 or 97
[5] Requires VS1
[6] Requires OPC-1797
[7] Charges BP264 only
[8] Charges BP265 only
[9] Requires OPC-2004
[10] Requires OPC-2006
[11] Requires OPC-2006LS

YAESU

FT-60R

- 1000+ Memories
- Emergency Auto ID
- DTMF Keypad
- Alpha Display
- 5 Watts both bands
- PL Encode/Decode
- DCS Encode/Decode
- NOAA Weather Alert

The **Yaesu FT-60R** 144/440 HT has 5 watts output on both bands and features wideband receive from 108-520 and 700-999.990 MHz (less cellular). An Emergency Automatic ID system can transmit your callsign and engage the mic if you are disabled and unable to press the PTT switch. Two programmable keys are provided for your convenience. There is even a password feature to prevent unauthorized use of your radio. Radio to radio cloning is possible with the optional CT-27A cable. Other refinements include: One touch NOAA weather, nine DTMF auto dialer memories, die-cast weather resistant case, and ARTS. Includes: SMA flex antenna, NiMH battery, SBH-13 charge cradle, belt clip and wall charger. Size: 2.3 x 4.3 x 1.2 inches 13.1 oz. Our most popular HT!
List $200.00 *Order #0060* **Please Call**

VX-3R

- 1000 Alpha Memories
- CTCSS/DCS Encode
- CTCSS/DCS Decode
- AM Band Bar Antenna
- Wideband Receive
- FM Stereo Ear Jack
- CW Training Feature
- Mechanical Dial Lock
- WiRES™ Key
- AM/FM/SW Receive

The **Yaesu VX-3R** is a microminiature 2 meter/ 440 MHz handheld with extensive receive frequency coverage (500 kHz to 999 MHz, less cellular), providing local-area two-way amateur communications along with unmatched monitoring capability including AM, FM and shortwave bands. It is the world's smallest HT with 1.5/1 watt output on 2M/440. CTCSS/DCS with split tone capability is built in. You get a huge 1000 channel memory system. Power output is with the supplied 1 amp hour lithium ion battery 1.5 watts VHF and 1 watt UHF. With the optional E-DC-21 DC adapter, output jumps to 3 watts and 2 watts! The VX-3R comes with the FNB-82LI lithium ion battery and NC-85B charger and SMA flexible antenna. 1.9 x 3.2 x 0.9 inches.
List $258.00 *Order #3003* **Please Call**

FT-1DR

- Integrated GPS
- Dig. Group Monitor
- Group Short Msg.
- CTCSS/DCS
- AM/FM Wideband Rx
- Weather Alert
- Backlit Keypad & LCD
- Wideband Receive
- MicroSD Port

The Yaesu **FT-1DR** offers a new level of technology that you can hold in your hand. This 2 meter/ 440 HT provides both analog *and* 12.5 kHz C4FM FDMA digital communications on both bands with up to 5 watts. Enjoy wideband from 500 kHz to 999 MHz (less cellular frequencies) reception including the AM and FM broadcast band. Solid AM band reception is enhanced with a built-in bar antenna. Other features include: vibrate function, GPS with logging and exchange function, image transmit (QVGA 320x240), Wires, optional camera microphone, mini-USB port, Micro-SD card port. It is robustly constructed to withstand water spray (IPX5). Available in *#0111* silver or *#0112* black.
List $400.00 *Order #0111* **Please Call**
Black case.
List $400.00 *Order #0112* **Please Call**

FT-252
FT-257

- Solid Construction
- Weather Receive
- 200 Memories
- Extended Receive
- IPX5 Water Resistant
- CTCSS Encode/Decode
- DCS Encode/Decode
- ATS System
- Easy Operation

The **Yaesu FT-252** is a compact, rugged, easy-to-use, high-performance FM 2 meter, 5 watt handheld. Receive coverage is from 136 to 174 MHz and it features a 200 channel memory system. CTCSS and DCS encode/decode are included. The FT-252 is water protection to IPX5 specifications. It has a strong 800mW audio amp for noisy environments. The ATS (Automatic Transponder System) "beeps" when moving out of communication range. Your FT-252 comes with: FNB-124Li battery, SAD-11B battery charger, flexible SMA antenna and CLIP-24 belt clip.
List $135.00 *Order #0252* **Please Call**

The **Yaesu FT-257** is a "440" version of the FT-252. Transmit with 5 watts from 430 to 450 MHz. Receive coverage is 400-480 .
List $135.00 *Order #1257* **Please Call**

VX-6R

- 6 Char. Alpha,
- 900 Memories
- EPCS
- CTCSS/DCS
- AM/FM Wideband Rx
- Weather Alert
- Backlit Keypad & LCD
- Submersible
- Auto In-Range Transp.

The **Yaesu VX-6R** is a tri-band (2M, 220 & 440 MHz) HT with extensive receive 504 kHz ~ 998.99 MHz (cellular blocked). Like the VX-7R, it is submersible (JIS7) and extremely rugged. It puts out 5 Watts on 144 and 430 and 1.5 W on 220. With 900 6-digit alpha memories. It features the new "Emergency Automatic ID" (EAI) system, Enhanced Paging and Code Squelch (EPCS), "Wake-Up" battery saver system. Other features include: black magnesium case, severe weather alert, ARTS - auto in range transponder and multicolor transmit/receive LED. The volume and squelch knobs are oversized. 2.3 x 3.5 x 1.1 inches 9.5 oz. The VX-6R comes with: flexible SMA antenna, FNB-80LI lithium ion battery, NC-72B battery charger, belt clip and wrist strap. Please see accessories on page 73.
List $374.00 *Order #0666* **Please Call**

FT-270R

- 200 Memories
- 5 Watts RF Output
- Backlit Keypad
- Submersible to IPX7
- EPCS
- PL Encode/Decode
- DCS Encode/Decode
- ARTS System

The **Yaesu FT-270R** is a rugged, compact, high-performance 2 meter HT with 5 watts of RF power. The 16 key keypad supports direct frequency entry and 4 column DTMF. It has Enhanced Paging and Code Squelch (EPCS) that allows you to page a particular station and receive calls only from that station. You also get one-touch access to Yaesu's WiRES-II™ VoIP Internet Linking! CTCSS and DCS encode/decode are included with split tone capability. The FT-270R is ultra rugged and submersible to IPX7 specifications (3' for 3 mins). Includes: FNB-83 battery, NC-88B wall charger, SBH-13 charge cradle, antenna and belt clip. 2.4 x 4.72 x 1.3 inches. 13.8 oz.
List $194.00 *Order #5270* **Please Call**

The **Yaesu FT-277R** has very similar features but covers the 440 MHz band instead of the 2 meter band. Receive range is 420-470 MHz. 5W. 16 key.
List $194.00 *Order #5277* **Please Call**

YAESU

Accessories

Order #	Model	Item Description	List Price	Your Price	FT-1DR	FT-60R	VX-3R	VX-6R	VX-8DR	FT-250R	FT-270R
5340	ADMS250	Software CD & USB cable	48.77	37.95						■	
1423	ADMS270	Software CD & USB cable	48.77	37.95							■
4631	ADMS1J	Software CD & USB cable	48.77	37.95		■					
2050	ADMSVX6	Software CD & USB cable	48.77	37.95				■			
2303	ADMSVX8	Software CD & USB cable	82.31	59.95					■		
3365	BH2A	Bluetooth® Mono Headset[1]	114.00	79.95					■		
3348	BTK5	BH2A, BU2, PA46B, CD40	230.00	169.95					■		
4877	BU-2	Bluetooth Unit for radio	110.00	82.95					■		
4555	CD-15A	Lithium-Ion rapid charger	50.00	37.95				■			
5220	CD40	Charge cradle for BH1A/2A	30.00	22.95					■		
5173	CD41	Rapid Charge cradle[2]	50.00	37.95					■		
0927	CSC-88	Vinyl Carry Case	20.00	15.95							
2295	CSC-91	Vinyl Carry Case	20.00	15.95				■			
4959	CSC-92	Vinyl Carry Case	20.00	15.95			■				
5176	CSC-93	Vinyl Carry Case	20.00	15.95					■		
6068	CSC-97	Vinyl Carry Case	20.00	17.95	■						
0375	CT-27A	Radio to Radio Clone cable	14.00	12.95		■	■				
3729	CT-44	Two pin mic adapter	20.00	16.95	■	■	■			■	
0951	CT-91	Microphone adapter	20.00	15.95				■			■
5175	CT131	Microphone adapter	40.00	30.95					■		
3539	CT134	Clone cable	50.00	37.95					■		
5219	CT136	GPS antenna adapter	50.00	37.95					■		
5455	CT143	Serial PC cable [4]	60.00	44.95							
2440	CT144	Clone cable [4]	20.00	14.95							
5915	CT168	Clone Cable	25.00	21.95	■						
6067	CT170	Clone Cable 11pin-2.5mm	30.00	24.95	■						
6069	CT176	Data Cable	25.00	21.95	■						
3116	E-DC6	DC Cord only (plug & wire)	10.00	7.95	■	■		■	■	■	■
1373	E-DC21	Filtered Cigar Lighter Cord	50.00	37.95			■				
3173	FBA-23	Cell Holder (2 x AA)	40.00	29.95							
4163	FBA-25A	Cell Holder (6 x AA)	20.00	16.95		■				■	■
4950	FBA-37	Cell Holder (3 x AA)	23.00	18.95			■				
3068	FBA-39	Cell Holder (3 x AA)	40.00	29.95	■				■		
5032	FEP-4	Earphone for BH1/BH1A	20.00	16.95					■		
3073	FGPS-2	GPS unit	110.00	81.95					■		
0949	FNB-80LI	Li-Ion 7 VDC 1500 mAh	100.00	74.95				■			
1016	FNB-82LI	Li-Ion 7 VDC 1000 mAh	40.00	32.95			■				
2667	FNB-83	NiMH 7 VDC 1400 mAh	40.00	29.95		■					
4966	FNB-101LI	Li-Ion 7 VDC 1100 mAh	80.00	59.95					■		
5171	FNB-102LI	Li-Ion 7 VDC 1800 mAh	100.00	72.95					■		
2631	MH-34B4B	Compact Speaker Mic.	42.00	31.95	■	■	■				■
2388	MH-37A4B	Earpiece / Microphone	40.00	29.95	■	■	■				■
1374	MH-57A4B	Speaker Microphone	30.00	24.95				■			■
1801	MH-73A4B	Waterproof Speaker Mic.	63.00	49.95				■			■
5130	MH-74A7A	Speaker Microphone	85.00	64.95					■		
5875	MH-85A11U	Mic with Snap Shot Camera	150.00	119.95	■						
2260	PA-46B	AC wall charger for CD-40	20.00	17.95			■		■		
5854	PA-48B	AC wall charger	30.00	22.95	■				■		
5342	VAC 20B	Desktop Quick Charger	41.00	29.95						■	
4615	VAC370B	Desktop Quick Charger	79.00	64.95		■					■
6162	SDD-13	Filtered Cigar Lighter Cord	30.00	23.95	■	■		■	■	■	■
0669	SU-1	Barometric Sensor Unit	50.00	37.95				■			
4651	VC-24	VOX Headset	80.00	62.95				■			■
0443	VC-25	VOX Headset	84.00	64.95	■	■	■			■	
6333	SSM55A	Earphone Mic (former VC27)	42.00	33.95				■			■

Optional Accessories Footnotes

[1] Requires BU-2
[2] Requires NC86B
[3] Requires BU-2, FEP-4
[4] For VX-8GR

APRS® is a registered trademark of Bob Buringa WB4APR.

NIFTY HT REFERENCE CARDS

Today's HTs *are* complicated, but who wants to carry their *Owner's Manual* around? Nifty has come up with a nifty solution. See page 125.

DISCONTINUED ACCESSORIES

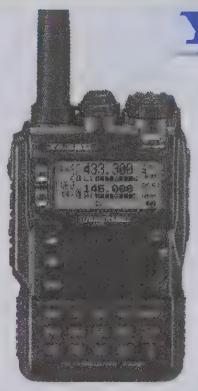
Universal Radio stocks many accessories for older, discontinued handi-talkies, mobiles and base stations. Please visit our website:

www.universal-radio.com

Then select:
✔ Online Catalog
✔ Amateur Handheld Transceivers
✔ Discontinued Amateur Handheld Transceivers

YAESU

VX-8DR



- Dot Matrix LCD
- Optional Bluetooth
- Optional GPS
- CTCSS/DCS
- AM/FM Wideband Rx
- Weather Alert
- Backlit Keypad & LCD
- Submersible
- Dual Receive

The **Yaesu VX-8DR** HT provides 5 watts FM on 50/144/430 MHz plus 1.5 watts on 222 MHz. It supports Bluetooth hands-free operation with the optional BU-2 and BH-1A or BH-2A accessories. There is also an optional GPS unit and antenna with loads of features. This radio supports APRS® 1200/9600 bps data communication (B band only) and is WiRES compatible. In fact, this latest "D" version adds these APRS enhancements:

✔ Smart Beaconing™ Function,
✔ Station List memories raised from 40 to 50.
✔ APRS® Message mems raised from 20 to 30.
✔ New DIGI-PATH route indication function.
✔ Heads up compass display to the GPS screen.
✔ Msg received LED flashing rate is selectable.
✔ DIGI-PATH route settings raised from 1 to 7.

The VX-8DR is submersible to IPX57 specs. A 7.4 V 1100 mAh Li-Ion battery is included. It supports simultaneous independent 2-signal dual receive function with both V+V or U+U. It has weather alert and a barometric sensor is included. You even get a high-resolution spectrum analyzer with ±60 channels indication with wave monitoring of received/modulated signal! CTCSS and DCS encode and decode are standard. 2.36 x 3.74 x 0.92".

List $598.00 *Order #1608* **Please Call**

ALINCO

DJ-C7T

- Auto Power Off
- 2Meter/440 MHz
- Mic/Ear Jack
- 200 Memories
- 300 mW RF Out
- Lithium Ion Battery
- CTCSS Encode
- CTCSS Decode
- Built-in Speaker

The **Alinco DJ-C7T** dual-band is ready to travel the world with CTCSS encode/decode and European tone bursts built-in! The DJ-C7T also boosts wideband receive, including VHF air, FM broadcast and VHF public service. Both standard and nonstandard repeater offsets are supported. The full featured DJ-C7T provides over 300 mW of efficient output with the supplied EBP-58 lithium battery. The power jumps to 500 mW when operating from external 6 VDC. Includes: EDC-126 AC adapter, EBP-58N battery and removable SMA flex antenna. 2.28 x 3.78 x 0.57" 3.6 oz.

List $162.95 *Order #0107* **Please Call**

✔ **Alinco accessories** are on page 75.

ALINCO

DJ-V57T

- Alpha Display
- CTCSS Enc/Dec
- 4 Scan Modes
- 200 Memories
- Accepts 12 VDC
- Auto Dialer
- Illuminated Keypad
- Internal VOX

The **Alinco DJ-V57T** 2 meter / 440 MHz dual band HT built to stand up to the elements! It is ruggedly built to IPX7 standards meaning it can be submersed in 3 feet of water for up to 30 minutes. This radio transmits with a full 5 watts on both bands (or 5/4.5 watts on batteries). In fact, you can select three RF levels (5, 2 or 0.5 watts). This radio has 200 memories, two-step attenuator, back-lit alphanumeric display and direct keypad frequency entry. The receive range is 136-173.995 MHz and 400-511.995 MHz. Tuning steps are: 5, 10, 12.5, 15, 20, 25 and 30 kHz. A strong 500 mW audio amp provides big audio. Both frequency and memory scanning is supported. Direct frequency entry via backlit keypad. Includes: EDC-146 charger adapter, EBP-65 NiMH 7.2 V 700 mAh battery, removable SMA flexible antenna, EBC-22 belt clip and hand strap. 2.28 x 4.33 x 1.43 inches 9.6 oz.

Order #0000 Discontinued

ALINCO

DJ-500T

- Backlit LCD
- CTCSS Enc/Dec
- 200 Alpha Memories
- 5/2.5/1 Watts
- FM Broadcast Band
- Scanning
- Direct Freq. Entry
- Internal VOX
- Tone Burst
- Li-ion Battery & Chgr.

The **Alinco DJ-500T** 2 meter / 440 MH dual-band transceiver. Transmit is 144-148 and 420-450 MHz. Receive is 88-108 MHz [FM broadcast], 136-174 and 400-480 MHz. Power is 5/2.5/1 Watts for both bands. You may set the display to backlight at white, orange or cherry. Robustly built to IP154 dust/splash-proof standard.
The DJ-500T comes with the EDC-189T charge stand, EDC-191T wall adapter, EBP-87 7.4V 1500 mAh Lithium-ion battery, flexible SMA rubber duck antenna and EBC-34 belt clip.

List $169.00 *Order #1656* **$129.95**

ALINCO

DJ-G7T

- Alpha Display
- CTCSS Enc/Dec
- Twin Dials
- 1000 Memories
- Accepts 12 VDC
- Spectrum Display
- Wideband Receive
- Triband Operation

The **Alinco DJ-G7T** tri-band transceiver gives you sophisticated operation on 2 meters, 440 and 1.2 GHz and all in a compact package. Full duplex operation is supported on any two bands. Power output is up to: 5 watts on 144, 4.5 watts on 440 and 1 watt on 1200 MHz. Enjoy wideband receive from 530 kHz to 1299.995 MHz (less cellular) in AM/FM/WFM modes. Refinements include: Twin user-assignable controls, die-cast chassis, spectrum display, backlit display with contrast/brightness adjust, CTCSS/DCS encode/decode, internal VOX and external 13.8 VDC jack. The DJ-G7T comes with the EDC-173 charger, EBP-73 7.4V 1200 mAh lithium-ion battery, flexible SMA rubber duck antenna and belt clip.

List $289.00 *Order #1007* **Please Call**

ALINCO

DJ-175T

- Scanning
- Backlit Keypad
- Backlit Display
- 200 Memories
- 5/2/0.5W RF
- NiMH Battery
- CTCSS Encode
- CTCSS Decode
- Tone Burst

The **Alinco DJ-175T** 2 meter HT sports an alphanumeric display for easy memory management. It has an ergonomic design that is user friendly and the 5-watt output battery is standard. Be prepared for virtually any selective calling situation or gaining access to repeaters with 39-tone CTCSS, 104 DCS, Tone-bursts and DTMF encoding, all included at no extra cost. Enjoy extended receive from 136-173.995 MHz. With flexible antenna, EBP-72 NiMH battery and EDC-165T drop-in trickle charger. 2.28 x 4.23 x 1.43 inches 9 ounces.

List $99.00 *Order #4175* **$89.95**

NIFTY HT REFERENCE CARDS

Today's HTs *are* complicated, but who wants to carry their *Owner's Manual* around? Nifty has come up with a nifty solution. See page 125.

ALINCO

DJ-V17T
DJ-V27T
DJ-V47T

- Alpha Display
- CTCSS Enc/Dec
- 4 Scan Modes
- 200 Memories
- Accepts 12 VDC
- Auto Dialer
- Extended Rx
- Tone Burst

The **Alinco DJ-V17T** 2 meter HT is built to stand up to the elements! It is ruggedly built to IPX7 standards meaning it can be submersed in 3 feet of water for up to 30 minutes. This 5 watt radio has 200 memories, and back-lit alphanumeric display and direct keypad frequency entry. The receive range is 130-173.995 MHz. Tuning steps are: 5, 10, 12.5, 15, 20, 25 and 30 kHz. A strong 500 mW audio amp provides big audio. A variety of charging adapters are available. Each DJ-V17T comes with: EDC-146 AC charger adapter, EBP-65 Ni-MH battery and SMA flexible antenna, belt clip and hand strap. 2.28 x 4.33 x 1.34 inches 9.6 oz.

List $148.00 *Order #0117* **Please Call**

The **DJ-V27T** is a 220 MHz, 5 watt version.
List $178.95 *Order #0227* **Please Call**

The **DJ-V47T** is a 440 MHz, 4.5 watt version.
List $124.95 *Order #4887* **Please Call**

WOUXUN®

KG-UV8D

- Voice Guide
- Li-ion Battery
- Dual Band Display
- DTMF Keypad
- Color Display
- 999 Memories
- Wide-Narrow BW
- Encode/Decode

The **Wouxun KG-UV8** dual band 2 Meter/440 MHz amateur dual bander offers sophisticated features and an economy price. It clearly has one of the largest and most impressive displays in the industry. You get 5 watts on VHF and 4 watts on UHF. Other features include: DTMF encode/decode, priority scan, SOS function, Wide-Narrow Bandwidth (25/12.5 kHz), flashlight, voice guide (Chinese/English), and stop watch function. Frequency coverage is: 136-174 and 400-480 MHz. The KG-UV8D comes with: Flexible SMA rubber antenna, Li-ion battery pack, intelligent drop-in charger, belt clip, hand strap and printed manual. Please note that this amateur radio is not certified for commercial use.

Order #0908 **Please Call**

ALINCO Accessories

Order #	Model	Item Description	List Price	Your Price	DJ-175T	DJ-596T	DJ-C7T	DJ-G7T	DJ-V57T	DJ-S45T	DJ-V17/47T
2086	EBP-58N	Li-ion 3 VDC 600 mAh	32.65	31.95			■				
1616	EBP-60	Li-ion 3 VDC 1200 mAh	35.65	34.98						■	
4711	EBP-64N	Li-ion 7 VDC 1500 mAh	66.65	59.95					■		■
4712	EBP-65N	NiMH 7 VDC 700 mAh	28.65	27.95					■		■
4713	EBP-66N	NiMH 7 VDC 2000 mAh	49.65	46.95					■		■
2371	EBP-71	Li-ion 7 VDC1200 mAh	55.65	49.95	■						
5197	EBP-72	NiMH 7 VDC 700 mAh	31.65	30.95	■						
1755	EBP-73	Li-Ion 7 VDC 1200 mAh	55.65	54.95				■			
3664	EDC-36	Mobile Charger	25.65	24.95		■		■	■		■
0708	EDC-37	DC Power Cable	9.65	8.95		■			■		■
0103	EDC-43	Mobile DC Power Cable	11.65	10.95		■		■	■[1]		■[1]
0861	EDC-138	Quick charger for EBP-60	62.65	49.98						■	
4714	EDC-143	Charger for EBP-65/66	35.65	34.95					■		■
4722	EDC-144	Charger for EBP-63/64/65/66	55.65	49.95					■		■
4715	EDC-146	Charger for EBP-65/66	16.00	12.95					■		■
5802	EDC-159	Charger for EBP-63/64	42.65	39.95					■		■
2216	EDH-32	DC Cigar Plug	19.65	18.95			■				
4716	EDH-34	Battery Case (6 x AA)	19.65	16.95					■		■
2049	EDH-35	Battery Case (6 x AA)	25.65	24.95				■			
4717	EDS-10	Microphone/Speaker cable	14.65	12.95				■	■		■
4718	EDS-11	Clone cable	14.65	13.95					■		■
4408	EJ-43U	Digital Board	124.30	79.98		■					
0465	EME-12	VOX/PTT Headset	76.65	74.95	■	■			◆	■	◆
2827	EME-13	VOX Mic & Earphone	76.65	73.95	■	■			◆	■	◆
2842	EME-15	Tie-pin VOX Mic & Earphone	71.65	69.95	■	■			◆	■	◆
5193	EME-21A	Hvy Earphone Tie-Clip Mic	103.65	89.95	■						
2290	EME-24	Earphone and Tie-Clip Mic	31.65	29.95			■				
5689	EME-36A	Earphone Mic	35.65	34.95				■			
0000	EMS-47	Speaker Mic	Disc.	Disc.	■	■				■	
2017	EMS-59	Speaker Mic	68.00	48.95	■				◆		◆
2281	EMS-60	Speaker Mic	42.65	39.95			■				
4888	EMS-62	Speaker Mic	53.65	46.95					■		■
1477	ERW-4C	PC Serial Cable [DB9F]	42.65	38.95	■	■		■	■	■	
1695	ERW-7	PC USB Cable	49.65	45.95	■	■		■	■		
2259	ESC-38	Case	23.00	14.95			■				
4721	ESC-41	Case	26.00	18.95					■		■
5194	ESC-49	Case	26.00	18.95	■						
1309	ESC-50	Case	29.00	24.95							■

◆ Needs EDS-10 cable adapter [1]Only charges NiMH batteries

Wouxun KG-UV6D

- VOX
- Li-ion Battery
- IP55 Durability
- DTMF Keypad
- Dual Display
- 199 Alpha Memories
- Voice Guide
- Encode/Decode

The **Wouxun KG-UV6Dv2** dual bander covers VHF 136-174 MHz and UHF 406.1-470 MHz and the FM broadcast band. Power output is 5 or 2 watts on VHF and 4 or 2 watts on UHF. Tuning steps are: 2.5, 5, 6.25, 10, 12.5, 25, 50 or 100 kHz. CTCSS decode/encode is featured plus DTMF encode, VOX, 500 mW audio output, 199 shared memories, 18 FM band memories, stop watch & SOS functions, 1750 Hz tone burst, low voltage warning, busy channel lock-out, backlit keys and English voice guide. The KG-UV6Dv2 is an *F.C.C. Part 90* certified radio and is shipped channelized and keyboard locked. It needs to be programmed to the applicable authorized frequency depending on the user's F.C.C. license type. This radio must be programmed with the KG-UV6D programming CD and PCO-001 USB cable (*#5552* $14.95). Includes: drop-in rapid charger with AC cord, belt clip, 1700 mAh Li-ion battery, printed manual, programming CD, flexible antenna with conventional male SMA plug.

Order #3006 **Please Call**

Optional Accessories

#	Model	Item Description	Price
5557	AIREARMIC	Air Conduit Ear Mic	18.95
5558	LC-1	Leather Case	11.95
5552	PCO-001	USB Pgm. Cable	14.95
5553	KG-HS-1	Ear Bud Microphone	9.95
5550	KG-2-A1	Cell Holder AA x 5	9.95
5549	KG-E-1	Mobile Batt Eliminator	14.95
5551	1A17KG3	Li-ion 7V 1700 mAh	22.95
5559	SPKRMIC	Speaker Mic	14.95
5690	ARC112[1]	SO239 to SMA ml cable	18.95
5560	BNC/SL16[2]	BNC fem to SMA fem adptr	5.95
4739	HMO5JSJ[2]	SO239 to SMA fm cable	14.95

[1] For KG-UV6D only [2] For KG-UV1/UV3D only

Wouxun KG-UVD1P/4

- Voice Guide
- Li-ion Battery
- FM Rx 88-108 MHz
- DTMF Keypad
- Dual Display
- 128 Memories
- Wide-Narrow BW
- Encode/Decode

The **Wouxun KG-UVD1P/4** dual bander provides 5 watts on VHF and 4 watts UHF. Coverage is 136-174 and 420-520 MHz. Advanced features include: 128 alphanumeric memories with scanning, multi frequency steps (5, 6.25, 10, 25, 50, 100 kHz), CTCSS (50 groups), DCS (105 groups), CTCSS/DCS Scan (Digital/Analog), 1750Hz tone, DTMF encode, high-low power, busy channel lock-out, VOX, wide-narrow bandwidth (25kHz/12.5kHz), voice guide and keypad lock. Many operational functions and parameters can be menu selected. It even receives the regular FM broadcast band (76-108 MHz). Please note that the antenna jack on the radio is an SMA-J *male*. With: Li-ion battery, intelligent drop-in charger, flexible SMA-J antenna and belt clip. One year limited warr. 2.3 x 4.2 x 1.55" 9 oz.
List $279.00 *Order #5547* **Please Call**

The **Wouxun KG-UVD1P/2** dual bander is similar to the above, but covers 2 meters and 220 rather than 2 meters and 440.
List $279.00 *Order #5548* **Please Call**

Wouxun KG-UV3D

- Voice Guide
- Li-ion Battery
- FM Rx 88-108 MHz
- DTMF Keypad
- Dual Display
- 128 Memories
- Wide-Narrow BW
- Encode/Decode

The **Wouxun KG-UV3D**-2/420-520 dual bander offers 5 watts on 144-148 MHz and 4 watts on 420-450 MHz. VHF extended receive covers 136-174 MHz. Enjoy: 128 alphanumeric memories with scanning, multi frequency steps (5, 6.25, 10, 25, 50, 100 kHz), CTCSS, DCS, CTCSS/DCS Scan, 1750Hz tone, DTMF encode, high-low power, busy channel lock-out, VOX, wide-narrow bandwidth (25/12.5kHz), FM broadcast band and keypad lock. Many operational functions and parameters can be menu selected. There is a special SOS and stopwatch function. Please note that the antenna jack on the radio is an SMA-J male. Comes with: Li-ion battery, intelligent drop-in charger, flexible SMA-J antenna and belt clip.

Order #5003 **$119.95**

The **Wouxun KG-UV3D**-2/216-280 is a "220" version of the Wouxun KG-UV3D-2/420-520 covering the 2 meter and 220 MHz band.

Order #2565 **Please Call**

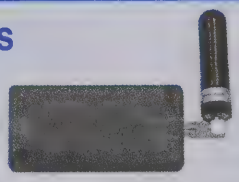
TYT TH-UVF1

- VOX Function
- Built-in CTCSS/DCS
- 12.5/25 kHz
- Multi Scanning Modes
- Dual Display
- 128 Memories
- Voice Feature
- 4/0.5 Watts Out

The **TYT TH-UVF1** is an affordable 2 meter/440 handheld amateur transceiver with extended receive including the FM broadcast band. Power output is selectable at 0.5 or 4 watts on 144-148, 430-450 MHz. This feature-rich radio has very good build-quality despite its modest price. The bandwidth is 12.5/25 kHz selectable. This radio is supplied with a 7.4V 1500 mAh Li-ion battery, drop-in charger, SMA type antenna, belt clip and carry strap. The vehicle cigar-type DC charging cable will also be included for a limited time. One year limited U.S.A. warranty. 2.2 x 4.6 x 1.25 in.
List $180.00 *Order #5541* **Please Call**

Internet Labs

DVAP 144
DVAP 440



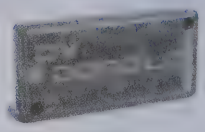
Do you have a 2 meter or 440 MHz D-Star radio and want to get directly on the D-Star gateway, without going through a D-Star repeater? You need the **Internet Labs DVAP** DV Access Point Dongle! It is almost like having a D-Star repeater at your home! The DVAP has its own SMA antenna and power is only 10 milliwatts, but this will provide a range of up to 100 yards. Please note that the DVAP does not have the DV Dongle functionality. In summary; a D-Star radio is required to communicate with the DVAP which requires a USB port on your PC, and a broadband Internet connection is required to communicate with the D-Star network. You will need to download the DVAPTool from

http://www.opendstar.org/tools

You can program a 2 meter simplex frequency that is not in use. The DVAP requires a USB port on a PC running XP/Vista/7 or Linux, or an Intel based Mac running Mac OS X. With USB cable.

DVAP 144 *Order #5485* **$249.95**
DVAP 440 *Order #5989* **$269.95**

Internet Labs
DV DONGLE



When an **Internet Labs DV Dongle** is connected to a PC or Mac and used with *DVTool* software, an amateur radio operator can connect to the D-Star gateway and receive/transmit just like a D-Star radio user. Users must be licensed and registered in the gateway system. Requires a PC or Mac with USB 2.0 full speed port, high speed Internet connection and PC headset. Includes Windows/Max/Linux *DVTool* software.
DV Dongle *Order #5209* **$199.95**

TIGERTRONICS
Manufacturers Of Innovative Communications Products

SIGNA LINK USB

The **Tigertronics SignaLink USB™** radio interface delivers optimum performance while eliminating the need to attach to your computer's existing sound card. Virtually all sound card digital and voice modes are supported. This includes traditional modes such as RTTY, SSTV and CW, as well as today's hottest new modes like PSK31, WSPR, WINMOR, MT-63 and EchoLink. Front panel controls that let you adjust your transmit audio, receive audio and transmit delay "on the fly". The SignaLink™ USB works with virtually all radios and can be attached to the Mic jack, Data Port or Accessory Port. Most customers will want to attach the unit to the back of the radio (Data or Accy Port), as this will allow the microphone to stay plugged in. A wide selection of extra assembled radio cables are available for common base and mobile radios. A special un-terminated radio cable is also available for radios that use a nonstandard connector, or for use with hand-held radios. Carefully study the product chart below to determine the correct model for your radio.

#	Model	Item Description	Price
5718	**SLUSB8R**	8 pin round mic	$109.95
5722	**SLUSB4R**	4 pin round mic	109.95
0733	**SLUSRJ1**	RJ11 mic	109.95
1712	**SLUS5PD**	5 pin DIN data/accs.	109.95
2486	**SLUSB8PD**	8 pin DIN data/accs.	109.95
0884	**SLUSB13I**	13 pin DIN Icom accs.	109.95
5759	**SLUSB13K**	13 pin DIN Kenw. accs.	109.95
2879	**SLUSBK3**	Elecraft K3[1]	109.95
1516	**SLUSBRJ4**	RJ45 mic	109.95
2705	**SLUSB6PM**	6 pin miniDIN data/ac	109.95

[1] rear panel Audio I/O & PTT jacks

We also carry the radio cables separately if you are changing rigs.

3791	**SLCAB8PD**	Cable 8DIN data	17.95
5723	**SLCAB13K**	Cable 13DIN Kenw.	19.95
3766	**SLCAB6PM**	Cable 6DIN data	17.95
4478	**SLCAB5PD**	Cable 5DIN data	17.95
2996	**SLCABNC**	Cable unterminated	9.95
6079	**SLCABKX3**	Cable Elecraft KX3	17.95

TYT Optional Accessories

#	Model	Item Description	List Price	Your Price	TH-F5	TH-UVF1
5545	**C-CABLE**	Radio to radio Clone Cable	$19.00	**$9.95**	■	■
5569	**SC-51**	Soft Case TH-UVF1	12.00	**10.95**		■
5546	**P-CABLE**	Programming USB Cable	24.00	**19.95**	■	■
5544	**TH-46**	Speaker Microphone	24.00	**17.95**	■	■
5567	**ELIM**	Mobile Battery Elliminator	18.00	**17.95**		■
5584	**ELIM THF5**	Mobile Battery Elliminator	18.00	**13.98**	■	
5568	**VEHCL CHG**	Mobile DC Charge Cable	18.00	**8.95**	■	■
5579	**LB75L-F5**	Li-ion Battery 7.4V 1500 mAh	28.00	**18.98**	■	
5542	**LB75L-F1**	Li-ion Battery 7.4V 1500 mAh	28.00	**20.98**		■
5672	**LB76L-F1**	Li-ion Battery 7.4V 1800 mAh	32.00	**24.95**		■
5566	**EAR MIC**	Earphone mic	12.00	**8.95**	■	■
5571	**ADPTRBNC**	SMA to BNC Adapter	6.00	**3.95**	■	■

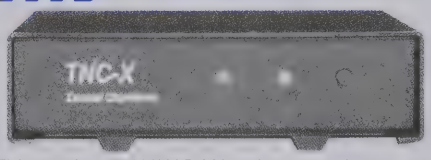
Kantronics KPC-3 +

The **KPC-3+** is a small full-featured packet TNC that comes with PBBS, KA-Node, Host Mode, Kiss and WEFAX capabilities. The "Plus" version has: two A/D inputs, two digital output control lines, digital pots so audio drive can be set from the PC, APRS commands and 250 page manual. Requires 6 to 25 VDC at 30 mA.
List $229.00 *Order #1908* **$199.95**

KAM XL

The **Kantronics KAM-XL** is a dual port, multi-modem TNC for both HF/UHF and VHF with room for new modes and future upgrades.
List $446.00 *Order #2069* **$409.95**

MFJ-1270X



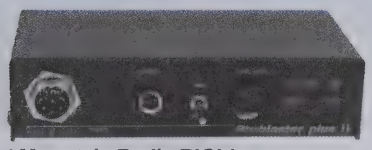
This **MFJ-1270X** TNC-X is a low-cost, low power, self-contained TNC currently deployed in thousands of locations worldwide. This USB TNC derives its power from the USB port of your computer. It also supports a separate serial port. The TNC-X is a KISS mode TNC and works with all software that supports KISS mode. This TNC works with Windows, Mac OS 9, X plus Linux. 5.2 x 1.5 x 3.25".
List $129.95 *Order #5354* **$124.95**

www.universal-radio.com
1 800 431-3939

➤ Prices and specifications are subject to change.

West Mountain Radio

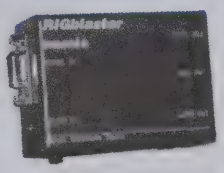
RIGBLASTER PLUS II



West Mountain Radio RIGblasters are compatible with almost every radio and every sound card equipped computer. Opto-isolators are used to fully isolate the computer ground circuit. Effective RFI suppression eliminates RF in the audio. Positive and fully automatic PTT control or VOX operation is available. This is a quality product, supplied in sturdy 1/16 inch aluminum cases, powder coat painted and silk screened. The current **RIGblaster "Plus" II** model features true keyed Morse and true FSK RTTY and supports either a serial or a USB port. Includes a USB cable, hook-up cables, instruction manual and software CD with freeware for almost every mode including but not limited to: PSK31, Packet, FSK441, MFSK16, Hellschriber, AMTOR, PACTOR I, MT63, CW, RTTY and SSTV. USB powered. No wall wart needed!

RB/PL2/CUSB *Order #5519* **$149.95**

RIGBLASTER NOMIC USB



The **RIGblaster Nomic** is small, inexpensive and perfect for portable, QRP or temporary setups. It uses a PTT keying circuit as a fully isolated CW/FSK keying output for direct keying of your rig's CW or FSK instead of using it for a sound card interface. No external power supply is needed! The supplied CD includes freeware for almost every mode including but not limited to: PSK31, Packet, FSK441, MFSK16, Hellschriber, AMTOR, PACTOR I, MT63, CW, RTTY and SSTV. Now with 8 pin *or* modular mic jack compatibility

RB/NO/CUSB *Order #3832* **$59.95**

West Mountain Radio

RIGBLASTER PLUG & PLAY

The **West Mountain Radio RIGblaster plug & play** is designed to connect through a radio's accessory or data jack. A built-in USB to serial converter provides T/R switching, CW keying and CAT/CI-V rig control and fully isolated audio and keying, runs from USB power. LED indicators: USB, PTT and CW. Includes USB and audio cables and CD. Most radios will additionally require a RigBlaster Data Jack Adapter which sells for $9.95. Please call, or visit our website for ordering the correct cables for your transceiver.

Order #4746 **$114.95**

RIGBLASTER PRO USB

This advanced **Pro USB** model incorporates the time proven operation of the M8 and plus model RIGblasters. New features include:

- ✔ Front panel LED status displays of PTT, CW, FSK, audio source and transmit audio level.
- ✔ Built in control interface for Yaesu CAT or Icom CI-V or Ten Tec TTL.
- ✔ Two independent keying outputs, one for true FSK, and another for keyboard CW keying.
- ✔ Electret microphone bias circuit.
- ✔ Xmit speech processing. ✔ Receive muting.
- ✔ Second mic. operation. ✔ Power switch.
- ✔ Dual headphone outputs with 1/8" & 1/4" jacks.
- ✔ Dual RCA type, PTT input and output jacks.

Includes: AC power supply, CD, mic cable, USB PC cable, (6) patch cords, adapter and stickers. 10.75 x 1.5 x 5.75 inches 19 oz. 120 VAC.

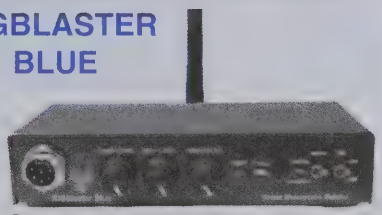
RB/PR/CUSB *Order #3834* **$269.95**

RIGBLASTER ADVANTAGE

The **RIGblaster Advantage** provides the flexibility and functionality that West Mountain Radio RIGblasters are known for *without* relying on a computer's sound card for digital mode communication. Adding the completely integrated sound card eliminates the need to reconfigure a computer's internal sound card, thus freeing the PC's existing sound card to generate system sounds, music etc. Compatible with 2500 radios!

RB/AD/CUSB *Order #5661* **$189.95**

RIGBLASTER BLUE



The **RIGblaster Blue** is a completely integrated Bluetooth wireless interface. It pairs with a PC, tablet or smartphone to provide a sound device and a rig control serial port. It also pairs with a Bluetooth headset for operating phone - receive and transmit. The integrated high gain Bluetooth antenna provides up to 33 feet range. It uses bi-directional audio Bluetooth protocol (HSP and HFP). You get more isolation, less noise and less interference. Includes: 8pin screw on custom 3 foot mic cable, 1/8" 6 foot audio cable, setup connectors, accessory kit, 9VDC adapter, DVD, antenna and printed manual.

RB/BLUE *Order #0677* **$189.95**

YAESU

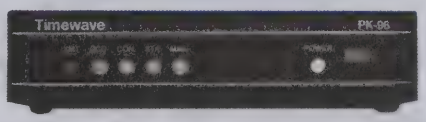
HRI-200

The **Yaesu HRI-200** uses the third generation WiRES-X technology. Introduced in 2014, it supports both analog and the new C4FM Digital radio communications mode. The HRI-200 is the inexpensive path into WIRES-X.

Order #5918 **$119.95**

TIMEWAVE TECHNOLOGY INC.

PK-96/100/USB



The **PK-96** is a plug-in and go 9600/1200 bps TNC that comes standard with 100K of battery-backed MailDrop memory. A demo copy of PK-term'99 is included. This Windows 95/98/ME/2000/NT menu-driven software from CSS makes operating the PK-96 easy. The included shareware WinAPRS™/GPS program allows you to see where other APRS users are. USB version. Requires 12-16 VDC @400 mA.

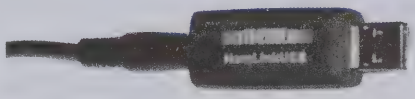
List $238.95 *Order #1078* **$229.95**

PK-232/SC+

The **Timewave PK-232/SC+** brings a new level of performance to the legendary PK-232 with sharp, accurate DSP filters and supports all the new sound card modes in addition to all of the existing PK-232 modes (Pactor, VHF/HF Packet, AMTOR/SITOR, Baudot, ASCII, Morse, HF Weather FAX, TDM and NAVTEX), plus has PBX built in. Requires 12-16 VDC @700 mA.

List $599.95 *Order #2051* **$589.95**

HAMLINK USB



The **Timewave HamLinkUSB™** is a USB to logic level conversion device for CAT/CI-V enabled transceivers that provides PTT output, keying output or foot switch input options. The HamLinkUSB™ rig controller logic level serial interface connects directly to radios with non-RS-232 CAT/CIV inputs. In addition to the standard serial interface on every HamLinkUSB™ rig controller, the user can choose an option that connects and controls PTT lines, keying lines or general purpose outputs. This device is compatible with most soundcard and software control programs, such as PK-Term 3.0. The PTT version of the HamLinkUSB has a RTS output with a driver transistor to operate a PTT line from most sound card programs. There are three LED indicators and it is USB 2.0 and 1.1 compatible.

HamLink *Order #3696* **$59.95**

HamlinkUSB CI-V cable assembly for Icom, Ten-Tec & Elecraft.

HLUSB-CIV *Order #4805* **$8.95**

HamlinkUSB MiniDIN-8 cable assembly for Yaesu FT100/100D/817/857.

HLUSB-CAT *Order #4806* **$13.95**

HamlinkUSB 4 conductor cable assembly with 3.5mm plug to open end cable.

HLUSB-4CON *Order #4807* **$13.95**

Z-100Plus

The **LDG Z-100Plus** is a low cost lightweight automatic antenna tuner that is perfect for portable or fixed operation. It tunes with 0.1 to 125 watts (100W on 6M). Backpackers and QRP operators will appreciate the latching relays so you can remove power once you have tuned. And when the tuner is idle, it is essentially off, drawing less than a microamp! Additionally, the Z-100Plus features 2000 fast memories to decrease tuning time upto 95%! Operation is simple. Provide a continuous carrier, then press and hold the tune button for 1 second. The red LED indicates tuner activity and the green LED indicates an SWR of 1.0 to 1.5 (steady green LED) and 1.5 to 2.0 (blinking green LED). If your antenna is already resonant, press and release the tune button to bypass the tuner. Requires 7-18 VDC at 100 mA.

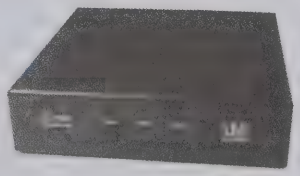
List $159.99 *Order #5253* **$149.95**

Z-11Pro2

The **LDG Z-11Pro2** is everything you always wanted in a small, portable tuner designed from the ground up for battery operation. At only 5" x 7.7" x 1.5",1.5 pounds, it handles 0.1 to 125 watts, making it ideal for both QRP and standard 100 watt transceivers from 160 - 6 meters. Requires 6 volts DC or 4 x AA or AAA cells (not included).

List $179.99 *Order #5429* **$169.95**

KT-100



The **LDG KT-100** is a flexible, low cost, easy to use autotuner for AT-300 compatible Kenwood transceivers. If you have a TS-2000, TS-50 or TS-480 or any Kenwood rig that is AT-300 compatible, the KT-100 serves as a dedicated tuner. Just press the Tune button *on the radio.* The LEDs on the front panel indicate tuning status, and will show a match in seconds, or even less if you've tuned near a previous frequency in the 2,000 memories. The supplied interface cable matches most modern Kenwood transceivers.

List $199.99 *Order #5184* **$189.95**

YT-1200

The just announced **LDG YT-1200** auto tuner fills a need for Yaesu transceiver owners who own the FT-450/D, FT-950, FTDX1200 or FTDX3000. 160 to 6 meters, 1 to 100 watts. Comes with the 1.5 foot CAT/Power interface cable.

List $259.99 *Order #6375* **$239.95**

AT-1000 Pro2

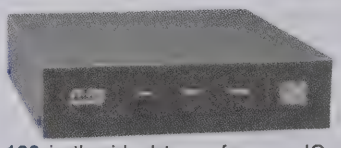
The **LDG AT-1000 Pro2** has 2,000 memories that store tuning parameters for almost instantaneous memory recall whenever you transmit on or near a frequency you have used before. Just key and it tunes! It has an LED bargraph with two selectable scale ranges (100/1000W) as well as SWR bargraph meter. You can add the optional M-1000 external analog meter (shown above). Dedicated control buttons allow you to fine-tune capacitance and inductance on those rare occasions when the AT-1000Pro2 cannot find a perfect match by itself. The AT-1000Pro2 will tune from 1.8 to 54.0 MHz continuously with 5 and 1,000 watts peak RF input (250W on 6m), and will match an amazing range of antennas, from Yagis and dipoles to inverted-Vs and slopers; virtually any coax-fed antenna from 6 to 1000 ohms impedance (16 – 150 ohms on 6 meters). Tuning time is usually under 10 seconds and under 0.2 seconds if you are transmitting near a previous frequency. Longwires or antennas fed with ladder line require an external balun. Includes six foot DC power cable.

List $539.99 *Order #5590* **$469.95**

Optional **LDG M-1000** external LED backlit meter.

List $129.99 *Order #5591* **$124.95**

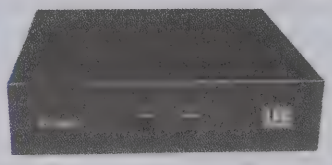
IT-100



The **LDG IT-100** is the ideal tuner for your IC-7000. First, it matches up to 10:1 SWR (3:1 on 6 meters) and it has 2,000 memories. Tuning time: 0.1 to 6 seconds full tune, 0.1 seconds memory tune. The power range is 1 to 125 watts (SSB/CW), and 100 watts on 6M. The IT-100 is only 6.5 x 6.5 x 1.5 inches and gets its DC power directly from the radio. SO-239 input and output. The IT-100 works with any Icom radio that supports AH-3/4 Icom antennas such as IC-7000/706MkIIG/703+/718/746Pro/756ProIII. Includes a 14 inch radio cable.

List $179.99 *Order #2103* **$169.95**

YT-100



The **LDG YT-100** auto tuner fills a need for Yaesu transceiver owners who own the FT-100, FT-100D, FT-857, FT-857D, FT-897 and FT-897D. With the integrated CAT port control, the tuner is powered from the interface. Operation could not be simpler: Just press the tune button on the tuner and everything else happens automatically, including tuning at low power. It operates from 160 to 6 meters with from 1 to 100 watts.

List $199.99 *Order #1224* **$189.95**

AT-100 Pro2

The **LDG AT-100 Pro2** desktop tuner covers all frequencies from 1.8 to 54 MHz handling 1 to 125 watts. It features over 2,000 memories for each antenna. The easy-to-read LED bargraphs show power and SWR, and a Function key on the front panel allows you to access mode and status data. It uses latching relays to retain the tuned configuration indefinitely even when powered down; current draw when not tuning is effectively zero. LDG's Switched-L tuning network will match dipoles, verticals, inverted-Vs or virtually any coax-fed antenna. It has all the features of the earlier AT-100 Pro, and adds a *Bypass* and *Antenna* LED. Requires 11-16 VDC at 500mA. 7.5 x 5.5 x 2 inches. Two year LDG limited warranty.

List $229.99 *Order #3213* **$199.95**

AT-200 Pro2

The **LDG AT-200 Pro2** will handle up to 200 watts SSB or CW on 1.8 – 30 MHz, and 100 watts on 54 MHz. It will match virtually any kind of coax-fed antenna. Use the AT-200 with longwires, random wires and antennas fed with ladder line with the optional RBA-4:1 balun. It will typically match a 10:1 SWR down to 1.5:1 in just a few seconds. The AT-200 has 16,000 memories, automatically storing tuning data for frequencies and bands as you use them. The rear panel has two input and one output SO239s. Requires 11-16 VDC at 750 mA.

List $259.00 *Order #5705* **$239.95**

AT-897 PLUS

The **LDG AT-897 Plus** is an autotuner for use with the FT-897 and mounts on the side of your rig. The AT-897 takes power directly from the CAT port of the FT-897 and provides a second CAT port. Continuous coverage 1.8 to 54 MHz is provided with an HF power rating of .01 to 100 Watts. Antenna impedance is 6 to 800 Ohms. Tuning time is 1 to 7 seconds.

List $199.99 *Order #0788* **$189.95**

✔ **Generic LDG tuners require a radio cable.**

AL-PAC for Alinco transceivers:

AL-PAC *Order #1193* **$11.95**

IC-PAC for Icom transceivers:

IC-PAC 14 inch *Order #4674* **$9.95**

IC-PAC6 6 foot *Order #5681* **$11.95**

Y-ACC for FT857/897 series transceivers:

Y-ACC *Order #3066* **$9.95**

IC-2000 for FT2000 series transceivers:

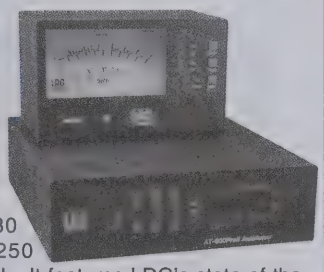
IC-2000 *Order #5668* **$9.95**

LDG ELECTRONICS

Z-817

The **LDG Z-817** is the ultimate autotuner for QRP radios including the Yaesu FT-817/817ND. The Z-817 interfaces to the CAT port (ACC) on the back of the FT-817. A 1 foot CAT cable and coax jumper is included for fast hook up. Push the Z-817 tune button and it will switch to PKT mode, transmit a carrier, tune the antenna, then restore the radio to the previous mode! 2000 memories cover 160 through 6 meters. The efficient Z-817 is powered by four AA internal alkaline batteries (not included) which will last about one year.
List $129.99 *Order #5236* **$119.95**

AT-600 Pro2



The **LDG AT-600 Pro** will handle up to 600 watts SSB/CW and 300 on RTTY (1.8–30 MHz) and 250 watts on 54 MHz. It features LDG's state-of-the-art, processor-controlled Switched-L tuner with two antenna ports with a front-panel indicator showing which is in use, plus separate memory banks for each antenna. The LED bar-graph meters show RF power, SWR and tuner status and there is an LED bypass indicator. You can add the optional M-600 external analog meter (shown above). Requires 11-16 VDC at 750 mA.
List $369.99 *Order #5923* **$339.95**

Optional **LDG M-600** external LED backlit meter.
List $129.99 *Order #1555* **$119.95**

RT-100

If you are worried about power loss due to SWR in your feedline, consider the **LDG RT-100**. This tuner is a 100 watt coax in / coax out remote tuner designed to be placed near the feedpoint of the antenna. It covers 1.8 to 54 MHz in the 0.1 to 100 watt power range (SSB/CW), 30 watt digital. It has 2000 memories and provides a tuning time: 0.1 to 6 seconds. It tunes 4 to 800 ohm loads (16 to 150 on 6M), 16 to 3200 ohms with optional 4:1 Balun. The RT-100 is DC powered over the coax, so add your own DC injection circuit (bias-T) or use the LDG RC-100 (sold separately) to power and control the tuner from your shack. Includes U-bolt for pipe mounting on tower or mast.
List $199.99 *Order #6113* **$189.95**

Optional **LDG RC-100** remote control and power.
List $49.99 *Order #0697* **$44.95**

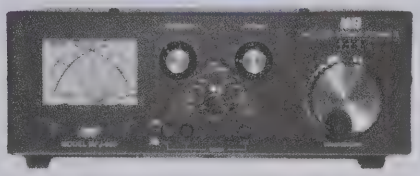
LDG RBA 4:1 balun for ladder line and long wires.
List $30.00 *Order #2286* **$28.95**

MFJ

MFJ-989D

This famous **MFJ-989D** 1500 watt HF antenna tuner features two massive transmitting capacitors and a roller inductor with a three digit counter to let you get the SWR down to the absolute minimum. Frequency range is 1.8 to 30 MHz. The peak reading cross-needle SWR/power meter has forward power ranges of 300 and 3,000 watts. Outputs for two coax cables, one wire or balanced line and dummy load are provided. A 300 watt, 50 ohm dummy load is built-in. 12.9 x 6 x 11.7". ◆
List $389.95 *Order #1332* **$359.95**

MFJ-969



The **MFJ-969** is the world's only 300 watt AirCore roller inductor tuner covering 160 through 6 meters. You get a cross-needle SWR/wattmeter, 8 position antenna switch, built-in 50 ohm dummy load and a heavy duty 4:1 balun. 3½ x 10½ x 9½". ◆
List $229.95 *Order #3538* **$199.95**

MFJ-941E

The **MFJ-941E** 300 watt PEP antenna tuner covers from 1.8 to 30 MHz, outputs for two coaxial cables and one random wire or balanced line. The SWR/power meter reads forward and reflected power in 30 & 300 watt ranges. 11 x 3 x 7" ◆
List $149.95 *Order #1130* **$129.95**

MFJ-945E

The compact **MFJ-945E** 300 watt tuner with illuminated cross-needle display, is ideal for mobile operation. The convenient placement of controls makes tuning fast and easy while driving. The SWR/power meter reads in 30 and 300 watt scales. 1.8-60 MHz. 8 x 2 x 6 inches. ◆
List $139.95 *Order #1541* **$124.95**

NOTE: MFJ tuners marked with a ◆ feature illuminated meters. For these meters to light you must provide 12VDC or the correct MFJ power supply (usually the MFJ-1312D *#2433* $15.95).

MFJ

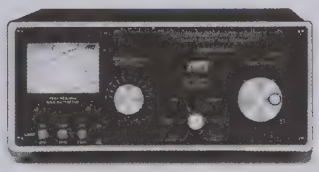
MFJ-949E

The **MFJ-949E** deluxe 300 watt *Versa Tuner II* gives you full coverage from 1.8 to 30 MHz, a peak and average reading cross-needle SWR/power meter and a built-in 300 watt dummy load. Outputs are provided for two coaxial cables and one random wire or balanced line. 10 x 3 x 7 inches.◆
List $189.95 *Order #1146* **$169.95**

MFJ-948

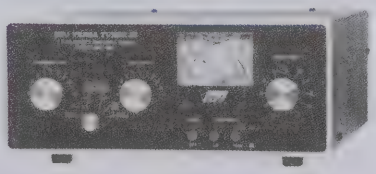
Similar to the MFJ-949E without the dummy load.◆
List $169.95 *Order #0648* **$149.95**

MFJ-986



The innovative **MFJ-986** *Differential-T* 3 KW roller inductor tuner from MFJ covers 1.8 to 30 MHz continuously. The lighted cross-needle meter not only shows you both forward and reflected power at a glance, but also has a peak reading function. Outputs are provided for two coaxial cables, one balanced line and a dummy load. ◆
List $349.95 *Order #0706* **$319.95**

MFJ-962D

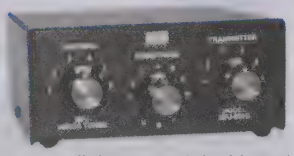


The **MFJ-962D** 1.5 KW Versa Tuner III features two continuously variable capacitors to minimize your SWR. The peak and average reading cross-needle SWR/power meter makes tuning a snap. Outputs for two coax cables, one random wire and one balanced line. 10¾" x 4½" x 15". ◆
List $319.95 *Order #1330* **$269.95**

MFJ-971

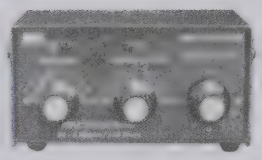
The **MFJ-971** is a compact 200 watt portable QRP tuner. It provides a convenient cross-needle type SWR/Wattmeter and features a special user-selectable 6 watt range for QRP operation. The T-match tuner covers 1.8-30 MHz and tunes almost any coax, wire, or balanced-feed type antenna (a 4:1 toroid balun is built in for balanced line). Only 6 x 2½ x 6". ◆
List $129.95 *Order #0845* **$109.95**

MFJ-901B



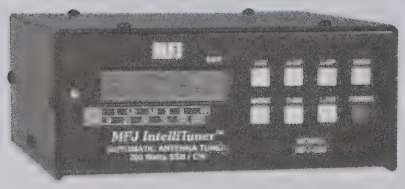
The **MFJ-901B** is a small (5 x 2 x 6 inch) and affordable 200 watt PEP versa tuner. The MFJ-901B matches dipoles, vees, random wires, verticals, mobile whips, beams, balanced and coax lines continuously from 1.8 to 30 MHz. You get SO-239 connectors for transmitter and coax, binding posts for random wire or balanced lines and a wing-nut ground connection. A 4:1 balun for balanced lines is also built into this sturdy, compact tuner. Works with solid state and tube rigs.
List $99.95 *Order #1327* **$89.95**

MFJ-902B



The **MFJ-902B** *Travel Tuner* lays claim to the smallest 150 watt antenna tuner covering 80 to 6 meters. It can be used with coax fed or random wire antennas. It has a tuner bypass slide switch on the back panel. Input and output is via SO-239 jacks. At only 4.5 x 2.25 x 3 inches it is great for DXpeditions, field day, travel and apartment use.
List $109.95 *Order #5928* **$99.95**

MFJ-929

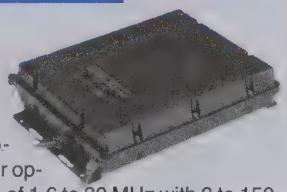


The **MFJ-929** IntelliTuner™ lets you automatically tune any coax fed or random wire antenna 1.8-30 MHz at full 200 Watts SSB/CW. It can match 6-1600 Ohms (SWR up to 32:1). You get a digital SWR/Wattmeter with backlit LCD and an antenna switch for two antennas.
List $229.95 *Order #1714* **$199.95**

MFJ-993B

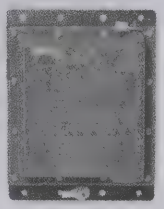
The **MFJ-993B** IntelliTuner™ lets you tune any antenna automatically, balanced or unbalanced - ultra fast. It is complete with SWR/watt-meter, antenna switch for two antennas and 4:1 current balun for balanced lines. You get a highly efficient L-network, wide 6-1600 ohm matching at full 300 Watts SSB/150 Watts CW, 1.8-30 MHz coverage, cross-needle and digital meters, aural SWR meter, backlit LCD display, remote control port, radio interface, heavy-duty 16 amp/1000 volt relays and more. Requires 12-15 VDC at 1 amp (or optional MFJ-1316 *#1469* $21.95). Only 10 x 2¾ x 9".
List $259.95 *Order #1846* **$239.95**

SG-230



The **SGC SG-230** Smartuner™ is a microprocessor controlled automatic antenna tuner operating in the range of 1.6 to 30 MHz with 3 to 150 watts of input power. It has a 500 address nonvolatile memory and tunes antennas from 8 to 80 feet. Weatherproof case. 12 x 16 x 3 inches.
SG-230 *Order #2834* **$549.95**

SG-237

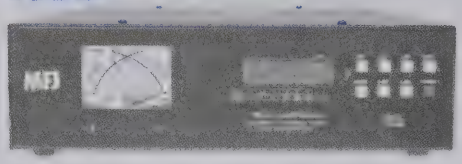


The **SGC SG-237** coupler handles up to 100 watts in the range of 1.8 to 60 MHz. Minimum antenna length of 9 feet is required for 3.5 to 60 MHz and 23 feet for 1.8 to 60 MHz. Power input is 3 to 100 watts. 6 x 7 x 1.5" Requires 13.8 VDC at 300 mA.
SG-237 *Order #1238* **$349.95**

SG-239

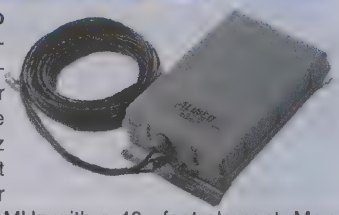
The **SGC SG-239** fits the coupler requirement of many low cost HF transceivers such as: Scout, FT-817, TS-50, IC-706 and K2 . The unit will work with silent receiver tuning 1.8-30 MHz, with 1.5 to 200 watts. It has 170 memories, with fast, accurate tuning via independent sensors, including VSWR, phase, magnitude, low impedance, and forward sensing. Requires 13.8 VDC at 230 mA. 6 x 1.85 x 7.5".
SG-239 *Order #1401* **$179.95**

MFJ-998



The **MFJ-998** IntelliTuner™ can handle 1500 watts and instantly matches impedances from 12-1600 ohms with over 20,000 VirtualAntenna™ Memories. The MFJ-998 also includes MFJ's Amplifier Bypass Control™: when a tuning cycle is initiated, it bypasses any in-line amplifier and initiates a low-power CW tuning carrier from your transceiver. When tuning is complete it reverts your transceiver to its prior power and mode, and re-enables the amplifier. A large analog Cross-Needle SWR/Wattmeter displays selectable 300/60 watt or 3000/600 watt forward/reflected full-scale ranges. A two-line, 16-character backlit LCD meter displays SWR, forward/reflected power, frequency, antenna selected and an autoranging power bargraph. You get 4 antenna memory banks for each of 2 switchable antenna connectors. Has two coax connectors and a binding post for end-fed long wire antennas. Requires 12-15 VDC at 1.3 amps. Prewired interface cables for Icom, Yaesu and Kenwood are available at $19.95 each.
List $699.95 *Order #4971* **$599.95**

ALINCO EDX2

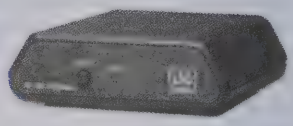


The **Alinco EDX-2** automatic antenna tuner can operate 3.5-30 MHz with a 10 foot antenna, or from 1.8-30 MHz with a 40+ foot element. Max. input power is 200 watts. Requires 13.8 VDC. 9 x 4 x 16 inches 8 lbs.
List $385.00 *Order #0932* **$339.95**

AMERITRON ATR-30

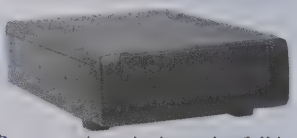
The **ATR-30** is Ameritron's own true legal limit antenna tuner allowing operation at sustained true RF output levels of over 1500 Watts continuous carrier into most load impedances. It also handles 3000 watts continuous SSB, CW duty even on 160 meters where most other antenna tuners fail.
List $599.95 *Order #4007* **$549.95**

LDG ELECTRONICS AL-100



The just announced **LDG AL-100** is designed to match the Alinco SR8T. See our website for info.
List $149.99 *Order #0922* **$143.95**

ICOM AT-180



The **Icom AT-180** is an automatic tuner for 1.9 to 54 MHz operation on select Icom transceivers. The matching impedance is 16.7-150 ohms HF and 20-125 ohms 6M. Tuning accuracy is <1.5:1 SWR. This tuner requires 8 watts to activate and can handle up to 120 watts. The required 13.8 VDC @1.1A is drawn from the supplied 13 pin ACC control cable. Also includes a 38 inch coaxial jumper cable. 6.3 x 2.4 x 8.9 inches 5.3 lbs.
List $599.00 *Order #3438* **$499.95**

MFJ-904

The **MFJ-904** *Travel Tuner* is the same as the MFJ-902, but adds a cross-needle SWR/Wattmeter. Push button selects forward/reflected power in 300/60 and 30/6 Watt ranges. 7¼ x 2¼ x 2¾".
List $129.95 *Order #2867* **$114.95**

MFJ-890

The **MFJ-890** gives up-to-the-minute worldwide DX band conditions in minutes on 14, 18, 21, 24, 28 MHz bands using the International Beacon Network of 18 beacons throughout the world! This lets you instantly see which beacon you're hearing on your transceiver -- an LED lights up on its world map to show you the beacon location and where to point your antenna. It's fascinating to hear and watch each beacon location light up as they become active across the world. MFJ DX Beacon Monitor lets you instantly see on a world map which beacon you're hearing. You do not have to copy CW at 22 wpm to identify a beacon. When you hear a beacon, an LED instantly lights up on a world map to show you its location. You can positively identify each beacon -- even if the signal is weak, and the CW is fluttery or distorted. The transmit sequence of the beacons are precision timed using GPS. The MFJ DX Beacon Monitor duplicates this precision timing sequence. A microprocessor and a built-in WWVB atomic clock receiver maintain ultra precise timing. The MFJ-890 is a self-contained stand-alone unit. It requires no connection to your transceiver or receiver. It measures 6.75 x 5.25 x 3 inches. It uses 12 VDC, or 110 VAC with optional MFJ-1312D power supply *#2433*.

List $119.95 *Order #4537* **$109.95**
MFJ-1312D PS *Order #2433* **$15.95**

MFJ-267

The **MFJ-267** dry dummy load will handle 1500 watts for ten seconds or 100 watts for ten minutes. SWR is better than 1.3 : 1 up to 30 MHz. It features a built in SWR watt meter. The large 3 inch cross-needle meter reads true-peak or average power. Reads forward and reflected power and SWR on a highly visible dual cross-needle meter movement at a single glance. The frequency coverage is 1.8-54 MHz. Power ranges are 300/3000 watts forward and 60/600 watts reflected. Reads PEP or average power and SWR from 1:1 to 8:1. The wattmeter can be switched between the dummy load or an external antenna. For meter illumination you need 12 VDC, optional 9V battery or optional MFJ-1312D AC power supply. 4.3 x 3.125 x 10 inches.

List $159.95 *Order #2180* **$149.95**
MFJ-1312D PS *Order #2433* **$15.95**

MFJ-1116

Use the **MFJ-1116** to organize your 12 VDC power leads (up to 15 amps *total*). With meter, switch and 15 amp fuse.

List $59.95 *Order #0171* **$54.95**

MFJ-1118

The deluxe **MFJ-1118** features two fused heavy duty binding posts plus six switched light duty posts. Handles 35 amps total. Meter and switch.

List $84.95 *Order #1763* **$77.95**

MFJ-1128

The **MFJ-1128** DC power strip has 12 outlets. Installed fuses include: three 1 amp, four 5 amp, four 10 amp, one 25 amp, one 35 amp. It has a built-in 0-25 VDC Voltmeter. The ON/OFF switch controls outlets 4 through 12, and handles a total of 20 amps. Outlet 1, 2 and 3 are unswitched and handle 40 amps total. Includes 12 pair of Anderson PowerPole® 40 amp contacts, 10 fuses.

List $104.95 *Order #1499* **$99.95**

MFJ-704

The **MFJ-704** may help keep your neighbors happy while you have fun hamming. This low pass filter simply plugs between your rig and antenna. It suppresses TVI, RFI, telephone and other interference by reducing unwanted harmonics going to your antenna. At the same time your HF signal passes on through with very low loss. Handles full legal power from 1.8 to 30 MHz. SWR below 1.3 to 30 MHz into 50 Ohms. Attenuates above 40 MHz. 3 x 3 x 9 inches.

List $59.95 *Order #2597* **$54.95**

MFJ-260C

This 300 watt dummy load works 1 to 650 MHz (SWR: 1.1:1 1 to 30 MHz, 1.5:1 30-650 MHz) up to 30 seconds. SO-239 input. 2¼ x 2¼ x 7.

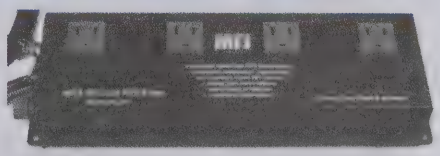
List $39.95 *Order #1314* **$34.95**

MFJ-264

The **MFJ-264** dry dummy load will handle 1500 watts for ten seconds or 100 watts for ten minutes. SWR is better than 1.3 : 1 up to 650 MHz.

List $74.95 *Order #2256* **$69.95**

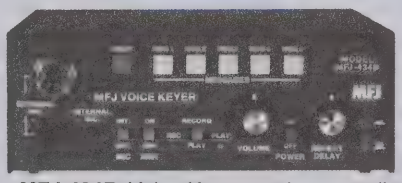
MFJ-1164B



The **MFJ-1164B** reduces AC power line RFI, noise, transients, surges generated by computers, motors, RF transmitters, static/lightning by 30 dB and up to 60-80 dB with good earth ground. It provides inductive isolation, capacitive decoupling, RFI rejection, over-voltage protection. MFJ-1164B has four 3-wire, 15 Amp, 120 VAC outlets that are spaced for large adapters. 25 Amps/3000 Watts max. Aluminum case 12 x 3½ x 2 inches.

List $79.95 *Order #4743* **$74.95**

MFJ-434B



The **MFJ-434B** *Voice Keyer* sends your call and contest exchanges in your own voice! Store frequently used phrases like *CQ Contest, QTH is Ohio* and more. Save your voice! You can store five messages to a total of 75 seconds. You can repeat messages continuously and vary the repeat delay from 3 to 500 seconds. A receive audio jack lets you record and play back off-the-air signals. Plug your 8 pin mic into the MFJ-434B, then the shielded 8 pin output cable into your radio. Internal jumpers let you select Kenwood, Icom, Yaesu, Alinco or Radio Shack rigs. The built-in speaker lets you monitor stored messages. With mini headphone jack. Requires 9-15 VDC, 9 volt battery or optional MFJ-1312D. 6.5 x 2.5 x 6.5".

List $199.95 *Order #1872* **$179.95**

MFJ-6404

The **MFJ-6404** is the perfect way to carry your delicate and valuable instruments! This durable plastic case is fitted with foam padding and a customizable 16½ x 10¾ x 1¾ inch foam insert. Store SWR/wattmeters, analyzers, radios, antenna tuners, etc. With a carrying strap and a lock and keys to secure your equipment.

List $39.95 *Order #3817* **$36.95**

MFJ-701

The **MFJ-701** *Snap-On-Choke* kit allows you to easily eliminate or minimize radio frequency interference (RFI). Just wind your AC cord through the choke. Package of four.

MFJ-701 *Order #1778* **$24.95**

West Mountain Radio

RIGRUNNER

The **RigRunner** is the most convenient and safest way to connect all your 12 VDC equipment to a power source. Eliminate messy binding posts, frayed wire connections, black tape or short circuits! These 13.8 VDC power panels use the excellent Anderson PowerPole connectors. Standardize all of your 12 VDC connections using the amateur radio ARES and RACES PowerPole system. Each outlet is individually fused with automotive ATC/ATO fuses. Shipped with fuses installed. (ATC/ATO auto fuses are easy to get and are available in 10 values from 1 to 40 amps). Each fuse has a blown fuse LED illuminator to show short circuit problems instantly! LED and audio alerts of safe, over and under voltage conditions. Audio alert is selectable to alarm on over voltage, under voltage or can be disabled. Mounting is easy with supplied 3M Bumpon® protective feet and adhesive pads or screwed down using any #6 or #8 screws (screws not supplied, except *#4768*). The panels below include fuses, but are sold without extra PowerPoles or cables (see optional C30/PK/12 and C45/PK/12).

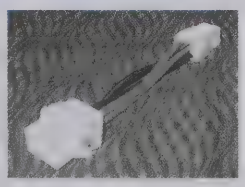
#4657	**RR 4004/USB**	4 Outlets +2 USB	$75.95
#2231	**RR 4005**	5 Outlets	$68.95
#2094	**RR 4008**	8 Outlets	$98.95
#2282	**RR 4010S**	10 Outlets Auto/Man	$127.95
#2229	**RR 4012**	12 Outlets	$109.95
#4768	**RR 8012/C**	12 Outlets [80 Amp]	$154.95

RIGRUNNER OPTIONS

#2228	**C30/PK/12**	12 PowerPoles 30A	$12.95
#3154	**C45/PK/12**	12 PowerPoles 45A	$17.95
#3133	**PS/CBL/6**	6 Ft Cable to PS	$14.95
#3146	**EX/CBL/6**	6 Ft Extension Cable	$14.95

Associated

ARC119



This handy **Associated ARC119** 4 inch DC power adapter cable converts the IC7000/TS480 4 pin power plug to accept a 6 pin Molex plug.

ARC-119 *Order #0273* $17.95

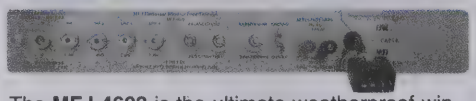
Associated

ARC

These extremely flexible 4 foot jumpers are made using very low loss LMR-100® coaxial cable (*not* high loss RG174!).

100-4BU	BNC Male to PL259	*#4791*	$17.95
100-4SU	SMA Male to PL259	*#4792*	$17.95
ARC109	SO239 to SMA Male	*#4513*	$18.95
ARC110	SO239 to BNC Male	*#4512*	$17.95
ARC112	SO239 to SMA Female	*#5690*	$18.95

MFJ-4603

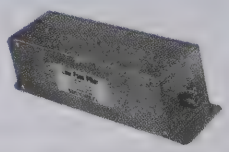


The **MFJ-4603** is the ultimate weatherproof window feed-through panel. It brings four SO-239 [UHF] jacks for HF/VHF/UHF antennas, one N jack, one F jack balanced line, random wire and ground into your house without drilling through walls. Plus there are DC binding posts and a channel for control cable (rotor, remote switch, etc.) Simply place in window sill and close window. One cut customizes it for any window up to 48 inches. Use horizontally or vertically. Inside/outside stainless steel plates bond all coax shields to ground. Cinch-Jones plug shown is not supplied.

List $89.95 *Order #4861* **$79.95**

BENCHER, INC.

YA-1

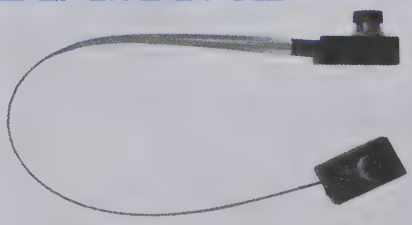


The **Bencher YA-1** is a quality high-power low pass filter. Frequency: 1.8 to 29.7 MHz. Power Rating: 1500 watts continuous, 5000 watts peak. Attenuation is >80 dB at 54 MHz.

List $150.00 *Order #1231* **$129.95**

DIAMOND

MGC50



The **Diamond MGC50** window/door feed-thru jumper allows you to get the antenna coax into the radio room without drilling holes in the wall or leaving a window/door open. Close the window and screen freely without damaging the coax! For use from 0-1500 MHz. Length: 19.6 inches. Max Power: HF 150W PEP (50W CW), VHF: 40W FM, UHF: 30W FM, 1.2 GHz: 10W FM. VSWR: 500MHz <1.2:1, 1000 MHz <1.3:1, 1500 MHz <2:1. Loss: 144 MHz 0.3dB, 440 MHz 0.6dB, 1200 MHz 1.6dB. 50 Ohm. SO-239 connectors. 19.6 inches.

MGC50 *Order #2375* **$49.95**

LDG ELECTRONICS

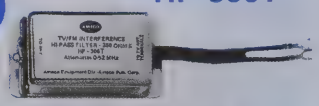
RBA

The **LDG RBA** baluns operate from 1.8 to 30 MHz, up to 200 watts.

RBA-4:1	*Order #2286*	$28.95
RBA-1:1	*Order #2046*	$28.95

AMECO

HP-300T



HP-75T

These high-pass filters connect to your TV or VCR to help reduce radio interference from CB or ham radios. Each filter has 9 shielded sections, a sharp cut-off at 52 MHz and over 80 dB attenuation below 50 MHz. (These items are not returnable).

The **Ameco HP-300T** version is for 300 ohm twin-lead installations. With screw terminals and 300 ohm lead. (Shown at the top above).

HP-300T *Order #2915* **$4.98**

The **Ameco HP-75T** version is for coax feedline and is ideal for cable TV systems. With connector and short coax jumper cable (F to F).

HP-75T *Order #0000* Discontinued

COMET

HBO5
HMO5
HSO5

These flexible 18 inch RG-174U jumpers allow for stress-free connection of external antennas to HTs. The HBO5 is shown.

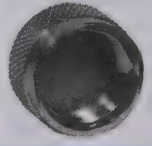
HBO5	BNC Female to SMA Male	*#2985*	$11.95
HM05	SO239 to BNC Male	*#4567*	$12.95
HSO5	SO239 to SMA Male	*#4454*	$13.95
HM05JSJ	SO239 to SMA Female	*#4739*	$14.95

COMET

CTC-50M

The **Comet CTC-50M** window/door feed-thru jumper allows you to get the antenna coax into the radio room without drilling holes in the wall or leaving a window/door open. Close the window and screen freely without damaging the coax! For use from 0-1300 MHz, with max power: HF 100W PEP, VHF: 60W FM, UHF: 40W FM, 900MHz-1.3GHz: 10W FM. Loss: DC-500MHz .5dB, 500-900MHz 1.3dB, 900-1300MHz 1.8dB. VSWR: <500MHz 1.3:1, >500MHz 1.5:1. 50 Ohm. SO-239 connectors. 15.75".

CTC-50M *Order #2750* **$45.95**



If you carry your HF rig around, consider purchasing a metal, gasketed dust cap for the antenna input. Designed to go over an SO-239 or female N jack.

Order #5907 **$1.89**

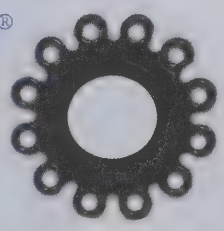
AOR ARD9000MkII

The **AOR ARD9000Mk2** Digital Voice Interface lets you explore the world of digital communications with your existing transceiver. This device uses the same audio frequencies (300 - 2500 Hz) as microphone audio. The open published (G4GUO) digital protocol means use of the ARD9000 is permitted on the U.S. amateur bands. The ARD9000Mk2 automatically recognizes incoming digital signals and starts decoding those signals immediately. Enjoy near-FM quality audio using SSB! You can easily shift between digital and analog operation. No rig modifications are required. The ARD9000MkII is also fully compatible with the ARD9800 and the original ARD9000. Includes improved 8 pin PTT speaker-mic, speaker cable, DC power cable, magnetic mount base and 8 pin metal plug. [Note: you will have to construct or purchase a cable into your radio's mic jack]. Requires 12 VDC at 200 mA.
List $459.00 *Order #2899* **$399.95**

ARD9000/9800 CABLES

#3323	**D-6MY**	Yaesu 6 C modular	$34.95
#3353	**D-8MI**	Icom 8 C modular	$34.95
#3322	**D-8MY**	Yaesu 8 C modular	$34.95
#0755	**D-8MK**	Kenwood 8 C modular	$34.95
#2024	**M-8MI**	Icom 8 pin mic plug	$34.95
#3342	**M-8MK**	Kenwood 8 pin mic plug	$34.95
#3339	**M-8MY**	Yaesu 8 pin mic plug	$34.95
#1483	**D-80**	To bare wire	$21.95

GuyTie®

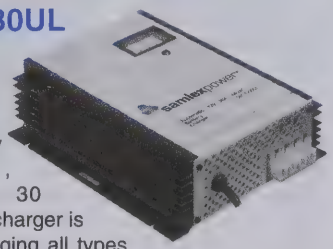


The GuyTie® mast rings provide multiple attach point for guy lines. The multiple attach points minimize hardware and simplify guying. They are molded of high strength polymer to provide both electrical isolation as well as effective wind and weather resistance. The Polymer is UV stabilized for long-term resistance to outdoor exposure. The GuyTie accepts up to ¼ inch guy lines including braided polymer as well as braided or solid wire. They are suitable for smaller radio or TV antennas as well as flagpoles and displays. 50 pound pull max. Available for mast outer diameters from 1 to 1.5 inches.

Model	Mast Size		Order#	Price
1.00 DIA	1.00 Inch	2104211	*#5441*	$3.99
1.12 DIA	1.12 Inch	2104212	*#5442*	$3.99
1.25 DIA	1.25 Inch	2104213	*#5443*	$3.99
1.38 DIA	1.38 Inch	2104214	*#5444*	$3.99
1.50 DIA	1.50 Inch	2104215	*#5445*	$3.99

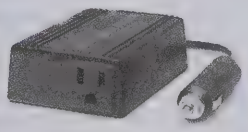
samlexamerica

SEC-1230UL



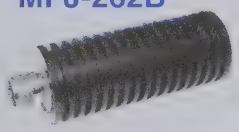
The **Samlex SEC-1230UL** is an advanced, fully automatic, three-stage 30 Amp battery charger is ideal for charging all types of 12 Volt lead-acid batteries (Flooded / Absorbed Glass Mat (AGM) / Gel Cell) from a 120 V, 60 Hz or 230 V, 50 Hz AC source. By means of a DIP switch setting, conversion to a two-stage algorithm is possible to charge batteries connected to a DC load (DC UPS). The unit can also be used as a DC power supply. It features overload, short-circuit and over-temperature protection. It can charge up to 3 separate battery banks. Input: 120 VAC 50/60 Hz, 6.5A (230 VAC, via jumper). Output: 13.5 VDC 30 A. Op. temp. 32°-104° F. 10.8 x 8.4 x 3.3" 6.4 lbs.
List $256.00 *Order #6051* **$189.95**

SI-50HP



The **Samlex SI-50HP** is a high efficiency modified sine-wave DC-AC inverter that converts 12 Volts DC to 50 watts of AC power at 115 Volts, 60 Hz. The unit comes with a cigar lighter plug connector. It has overload protection, low battery alarm / shut down. AC power is available from a single receptacle on the front panel. 1.4 x 3 x 5".
List $30.00 *Order #5064* **$12.98**

MFJ-262B



The **MFJ-262B** 50 Ohm dry dummy load features copper flanges and beo-ceramic for incredible low thermal resistance and capacitance. The MFJ-262B covers DC to 1 GHz with an SO-239 connector. It handles up to 200 Watts for 5 seconds and 35 Watts continuously. VSWR >1.16 at full range. Only 1 3/4W x 4 3/4H x 1 1/2D inches.
List $59.95 *Order #4039* **$55.95**

CLC198

The **Surmen CLC198** is a great way to protect your HT from the elements while you are on the go. It has an adjustable shoulder strap. The HT is secured by a double lock system.
Order #6179 **$14.95**

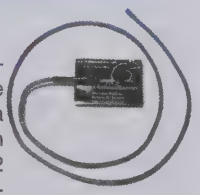
rt SYSTEMS

RT SYSTEMS SOFTWARE

RT Systems makes the best programming software. It comes with a Windows CD and USB cable. For Windows XP, Vista, Windows 7 (32 and 64 bit) or Windows 8 and 8.1 (full).

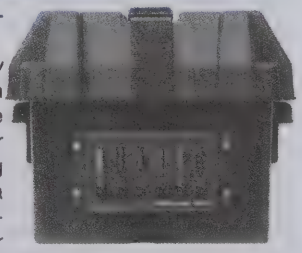
#	Item	For Radio	Price
5829	**ADMS450USB**	Yaesu FT450/D	$48.95
3995	**APKV57**	Alinco DJ-V57T	44.95
2344	**BAO5R**	Baofeng UV5R	44.95
0523	**KRS-D710G**	Kenw. TMD710G	44.95
6054	**RPSAT5888U**	Anytone AT5888U	44.95
6207	**RPSQ8**	TDXone Q8/A	44.95
6206	**RPSUVF1**	Wouxun KGUVF1	44.95
1826	**WCS 92USB**	Icom IC- 92	64.95
5361	**WCS 208USB**	Icom IC- 208H	44.95
4298	**WCS2200USB**	Icom IC-2200H	44.95
5857	**WCS2300USB**	Icom IC-2300H	44.95
5359	**WCS2820USB**	Icom IC-2820H	44.95
5828	**WCS7000USB**	Icom IC-7000	48.95
6106	**WCS7100USB**	Icom IC-7100	48.95
0983	**WCS7200USB**	Icom IC-7200	48.95
5831	**WCS9100USB**	Icom IC-9100	48.95
5895	**WCSD 31USB**	Icom ID-31A	44.95
6043	**WCSD 51 USB**	Icom ID-51A	44.95
6395	**WCSD 51+USB**	Icom ID-51A *Anniv.*	45.95
6299	**WCSD5100USB**	Icom ID-5100A	44.95
0421	**WCSV8000USB**	Icom IC-V8000	44.95

RAT TAIL



The patented **RatTail** antenna booster is a passive device that attaches to a handheld radio operating in the marine, aircraft or 2 Meter ham bands. An increase in transmitted energy of 9 to 12dB (800% - 1600%) is seen when measured at a distance of 1.2 miles or more. This increase results from a transformation of your radio's ¼ wave vertical antenna to a ½ wave dipole antenna. The LED in the eye of the rat glows red when you find the right place to mount it on your radio. Made in Canada.
RatTail *Order #2714* **$31.95**

West Mountain Radio U1



The **West Mountain Radio U1** ***Battery Buddy*** starts with a tough polypropylene box designed for the safe handling and charging of a battery. The attached RIGrunner 4005 provides 5 fused Anderson Powerpole® outlets to protect your equipment. Any blown fuse will be illuminated. A typical U1 AGM battery (not supplied) has a capacity of 36 Ah @ 20 hour rate.
U1 *Order #5910* **$84.95**

UNIVERSAL BUYS RADIOS

Call, email or write and tell us what you have to sell. We can provide a quote, subject to inspection.

MAHA MH-C808M

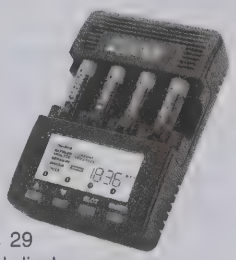
The **Maha MH-C808M** charger can charge up to 8 cells and works with AAA, AA, C or D cells. Charge AA, AAA, C and Ds all at once. It's like having eight chargers and you may choose between a soft charge and a fast charge mode. The Soft mode delivers the highest battery life and allows 100% compatibility with older, lower capacity batteries. The unit includes a heavy duty switching AC power supply. This charger has a very neat backlit LCD display that displays the charging status for each battery independently. Cells not supplied.
List $109.95 *Order #4724* **$84.95**

Maha Powerex Nickel Metal Hydride AA cells. Package of four (1.2 V 2700 mAh).
MH4AA-270 *Order #3869* **$13.95**

MH-C401FS4

The **Maha MH-C401FS4** *cool charger* lets you recharge 4 AA or AAA NiMH/NiCD batteries accurately and coolly. You can select 100-minute rapid charge or a slower, gentler 5-hour charge. Comes with four AA 2700mAh NiMH cells.
List $49.95 *Order #1507* **$44.95**

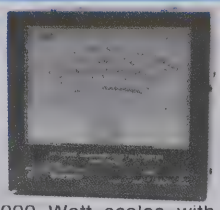
MH-C9000



The **Maha MH-C9000** is like having four charger-analyzers for AA and AAA NiMH / NiCD batteries. It has a backlit LCD that shows: capacity, voltage, time and current. It features 29 selectable charging and discharging rates. Charging current is 0.2A to 2.0A and discharging current is 0.1A to 1.0A. The MH-C9000 has five modes: **Charge:** Recharges the battery at the selected rate, for batteries used frequently. **Refresh & Analyze:** Charges the battery, rest for one hour, discharge, rest again, then recharges it, for batteries stored more than two weeks but less than 3 months. **Break-In:** Charges battery at 0.1C for 16 hours, rest for one hour, discharges battery at 0.2C, then recharges again at 0.1C for 16 hours, for new batteries and those stored > 3 months. **Discharge:** Discharges the battery at the selected rate. **Cycle:** Performs charge-discharge cycle for up to 12 times with discharge capacity stored in memory. Recharges battery after final cycle. With 100-240 VAC worldwide travel adapter and is 12VDC compatible. The batteries shown are *not* included.
List $69.95 *Order #4865* **$54.95**

MFJ

MFJ-869



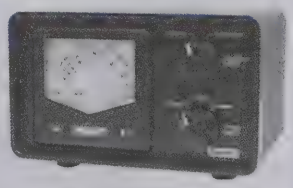
The huge **MFJ-869** features a giant 6½ inch meter. It covers 1.8 to 60 MHz and has 20/200/2000 Watt scales with TruePeak, average forward and reflected power modes and fully-automatic SWR readings. This meter also has an amplifier bypass control and control relay for high SWR. Has audio and visual alarms for high SWR. It even has field-upgradeable firmware. 7 x 5½ x 5 inches. It uses a 9V battery (not supplied), 12 VDC or 110 VAC with optional MFJ-1312D.
List $219.95 *Order #5382* **$199.95**

MFJ-828

The **MFJ-828** digital SWR/wattmeter/frequency counter measures up to 1500 watts from 1.8 to 54 MHz. The three power ranges are automatically selected: QRP (25W), mid (250W) and high (1500W). True peak or average forward and reflected watts, SWR and frequency can be simultaneously displayed. There are also auto-ranging bar meter modes to display forward and reflected power, SWR and power twin bar meters, or SWR only bar meter. SWR and forward power are also displayed numerically. Peakhold feature freezes the highest forward power displayed bar segment. A built-in frequency counter gives any transmitter a digital frequency readout in continuous carrier mode. The amplifier bypass control feature protects your amplifier by taking your amplifier off-line should the SWR increase above a user-defined limit. Information is displayed on a 2-line 16-character high-contrast backlit LCD display. The MFJ-828 also includes a big lighted cross-needle SWR/wattmeter. Requires 12 VDC at 250 mA (or 110 VAC with optional MFJ-1312D). 6.5 x 2.675 x 6 inches.
List $229.95 *Order #5820* **$214.95**

DIAMOND

SX-240C

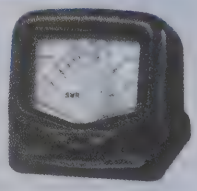


The **Diamond SX-240C** is a precision SWR-power meter featuring cross needle design for measuring SWR and output power simultaneously. This meter is rated from 1.8-54, and 140-470 MHz (Note: 220 MHz uses a correction factor). Power ranges of 30W, 300W and 3KW (HF only). Reads: Forward RF power/Reflected RF power/ SWR, PEP monitor. Requires 13.8 VDC. DC cord included. The connector type is SO-239.
List $349.95 *Order #5347* **$299.95**

➤ Please see **Par** intermod filters on page 35.

DIAMOND

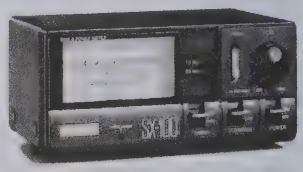
SX-20C/SX-40C



The **Diamond SX-20C** is a compact SWR-power meter featuring cross needle design for measuring SWR and output power simultaneously. The small size makes it ideal for testing mobile and base installations. Connector type is SO-239. The SX-20C is rated for 3.5-30, 50-54 and 130-150 MHz with ranges of 30 and 300 watts.

The **Diamond SX-40C** is similar to the SX-20C, but rated for 144-470 MHz with ranges of 30 and 300 watts. (220 MHz uses a correction factor).
SX-20C *Order #1340* **$79.95**
SX-40C *Order #1337* **$74.95**

SX-100



The Diamond **SX-100** precision SWR Power meter covers 1.8 - 60 MHz with power ranges of 30, 300 and 3000 watts. Power measurement accuracy is ±10% with an insertion loss of less than 0.1 dB.
List $144.95 *Order #1673* **$134.95**

SX-200

The **SX-200** covers 1.8 - 200 MHz in power ranges of 5, 20 and 200 watts. Measurement accuracy is better than ±10%. Insertion loss is < 0.15 dB.
List $99.95 *Order #2315* **$94.95**

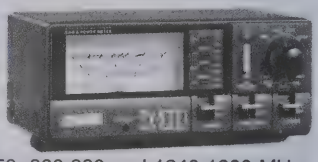
SX-400

The **SX-400** VHF/UHF SWR/Power meter covers 140 - 525 MHz in ranges of 5, 20 and 200 watts. Measurement accuracy is better than ±10%.
List $114.95 *Order #2785* **$109.95**

SX-600

The **SX-600** dual-sensor HF/VHF, SWR/Power meter covers 1.8 -160 and 140 - 525 MHz in power ranges of 5, 20 and 200 watts. Measurement accuracy is ±10%. Insertion loss is less than 0.1 dB.
List $184.95 *Order #2698* **$179.95**

SX-1100



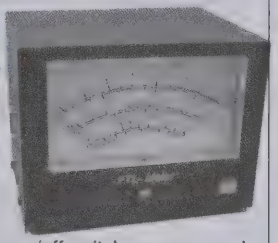
The **SX-1100** dual-sensor SWR/Power meter covers 1.8-160, 430-450, 800-930 and 1240-1300 MHz. with power ranges of 5, 20 and 200 watts. Accuracy is ±10% with an insertion loss of less than 0.2 dB for sensor one SO239 (1.8 - 160 MHz) and less than 0.15 dB for sensor two N (430 - 1300 MHz).
List $234.95 *Order #3118* **$209.95**

LDG ELECTRONICS

FT-METER

The **LDG FT-Meter** takes advantage of the meter jack on front of the Yaesu FT-857/857D and FT-897/897D. The FT-Meter presents a lush, highly readable 2.5 inch meter face with calibrated scales for signal strength and discriminator reading on receive, and power output, SWR, modulation, ALC action and supply voltage on transmit. Each function is selectable from the radio's menu. Easily visible from anywhere on your desk or dash, the FT-Meter is illuminated pale blue by external 12 VDC.
List $49.00 *Order #1198* **$48.95**

FTL-METER



The **LDG FTL-Meter** is a larger version of t LDG's popular FTL-Meter. It's a highly readable 4.5 inch meter face and is illuminated pale blue by external 12 VDC. Lamp on/off switch on rear panel.
List $79.00 *Order #3481* **$74.95**

DC DVM

Here is a low cost way to measure DC volts in the range of 3 to 30 volts. The refresh rate is 500mS. Error is 1%. Size is 24x15x10mm. The digits are 0.36 inches high. Three wires: red power "+" (3-28VDC), white sense +, black power/sense "-".

DC DVM BLUE *Order #0794* **$4.95**
DC DVM RED *Order #6165* **$4.95**

West Mountain Radio

PWR check

The **West Mountain PWRcheck** is a integrated DC power analyzer, watt meter and voltage monitor. It features a visual alarm with programmable limits for current, voltage, wattage and amp-hours. It has real time back lit graphic LCD with 13 display modes. The PWRcheck stores 174,000 points @1 data point/min. for historical data logging. USB port and PC software included that supports real time monitoring, data download and charting. Handles up to 40A. With PowerPole® connectors. Includes USB cable.
List $184.95 *Order #2066* **$169.95**

MFJ-850B

The **MFJ-850B** line voltage meter helps you see low voltage "Brown out" conditions. It reads voltage from 95-135 volts with 2% accuracy. Plugs into an AC outlet. 2.25 x 2.25 x 1.5"
Order #1849 **$22.95**

BIRD 43

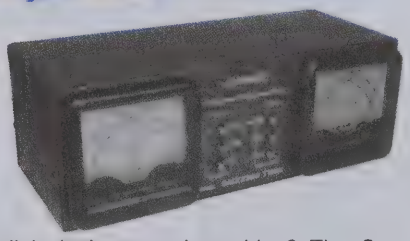
The **Bird Model 43** thruline directional wattmeter is a portable insertion-type instrument for measuring forward and reflected power in coaxial transmission lines. It will accurately measure RF power under any load condition. Plug-in elements are available to fit your frequency and power needs. Call for unlisted elements.

Bird 43 UHF *Order #1739* **$344.95**
Bird 43 N *Order #1738* **$347.95**

50H Element 50 watt 2 - 30 MHz. *Order #1743* **$189.95**
250H Element 250 watt 2 - 30 MHz. *Order #1749* **$189.95**
500H Element 500 watt 2 - 30 MHz. *Order #1764* **$189.95**
1000H Element 1000 watt 2 - 30 MHz. *Order #1750* **$189.95**
5000H Element 5000 watt 2 - 30 MHz. *Order #1761* **$289.95**
10000H Element 10000 watt 2 - 30 MHz. *Order #3864* **$289.95**
25C Element 25 watt 100 - 250 MHz. *Order #1736* **$94.95**
50C Element 50 watt 100 - 250 MHz. *Order #1741* **$94.95**
100C Element 100 watt 100 - 250 MHz. *Order #1744* **$94.95**
500C Element 500 watt 100 - 250 MHz. *Order #0243* **$94.95**
50E Element 50 watt 400 - 1000 MHz. *Order #0809* **$94.95**
CC6 Carry Case for 43 meter and 7 elements. *Order #4480* **$89.95**
EC1 Carry Case for 12 elements. *Order #2904* **$49.95**

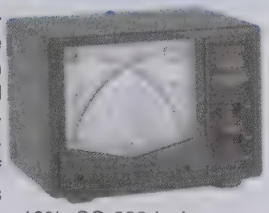
COMET

CMX2300



Well isn't these a clever idea? The **Comet CMX2300** is a true *twin* SWR/power meter. The left side covers 1.8 to 200 MHz with up to 3000 watts (30/300/3000). The right side covers 140 to 525 with up to 200 watts (20/50/200). FWD, REF and SWR readings are displayed simultaneously on each meter. And both meters can even be used simultaneously. Power reading may be switched from PEP to Average. The rear panel features four 50 ohm SO-239s. The power requirement is 11-15 VDC at 450 mA. The meters are illuminated. 9.9 x 3.9 x 5.4 inches.
List $224.95 *Order #3523* **$189.95**

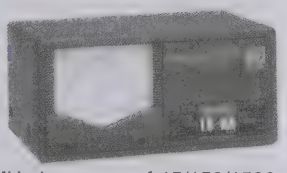
DAIWA CN-801HP CN-801V



The **Daiwa CN-801HP** cross-needle meter displays both forward and reflected power over a frequency range of 1.8-200 MHz in ranges of 20/200/2000 watts forward. Accuracy is ±10%. SO-239 jacks.
List $174.95 *Order #1035* **$154.95**

The **Daiwa CN-801V** cross-needle meter displays both forward and reflected power over a frequency range of 140-525 MHz in ranges of 20/200 watts forward. Accuracy is ±10%. SO-239 jacks.
List $169.95 *Order #1326* **$149.95**

CN-101L



The **Daiwa CN-101L** cross-needle meter displays both forward and reflected power in a range of 1.8-150 MHz in ranges of 15/150/1500 watts forward. Accuracy is ±10%. SO-239 jacks.
List $114.95 *Order #1889* **$95.95**

CN-103L

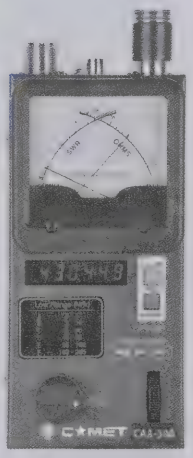
The **Daiwa CN-103L** looks like the CN-101L, but is for the VHF/UHF enthusiast. The CN-103L covers 140-450 MHz in ranges of 20/200 watts forward. SO-239 jacks.
List $114.95 *Order #2253* **$99.95**

CN-103LN

The **Daiwa CN-103LN** is identical to the CN103L, but features N connectors rather than SO-239s.
List $115.95 *Order #0182* **$102.95**

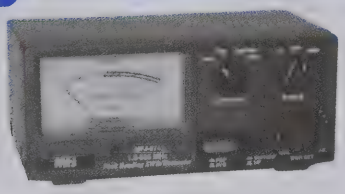
COMET

CAA-500



The **Comet CAA-500** antenna analyzer is a professional class instrument for measuring SWR, resonance and impedance. It features a highly sensitive, high precision Yokogawa meter for measurement accuracy in seven ranges covering 1.8 to 500 MHz. Impedance is 12.5 to 300 ohms. VSWR 1:1 to infinity. Digital readout accurate to 1 kHz. An OVER LED indicates an out of range condition. The CAA-500 will operate for up to 14 hours from six AA cells (not supplied). When the batteries become weak the decimal point will start blinking. It will also operate from an external 12 VDC source. A DC power cable is supplied. There is an SO239 input jack for Bands A - F and a female N for the High range. This extremely well-built instrument is extremely effective, yet very easy to use.
List $449.00 *Order #1402* **$399.95**

MFJ-874



The **MFJ-874** *GrandMaster* SWR/Wattmeter covers 1.8 - 525 MHz with 5, 20 and 200 watt power ranges. The meter is peak-reading for SSB and average reading for CW/AM and SWR operation. It has a 3.25 x 1.25 inch precision meter with black and red meter scale. The rear panel has air dielectric SO-239 input and output jacks, plus a 12 VDC input jack. A DC power cable is included for dial illumination or you may purchase the optional MFJ-1312D for AC operation. 7.5 x 3.125 x 4.25". 3 watt drive is required for SWR reading.

List $109.95 *Order #6351* **$99.95**
MFJ-1312D PS *Order #2433* **$15.95**

MFJ-870

The **MFJ-870** *GrandMaster* SWR/Wattmeter is the same as the MFJ-874 above, but covers 1.6-60 MHz with 3, 30 and 3000 watt power ranges.

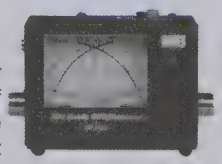
List $79.95 *Order #6099* **$74.95**

MFJ-225

The **MFJ-225** takes RF testing to the next level with this two-port graphic antenna analyzer. It has: LCD graphics, two-port VNA measurement, PC-Interface using IG-miniVNA freeware and precise DDS frequency control. It tunes from 1.5-179.9 MHz with1 kHz resolution with no mechanical band switches or tuning elements. In the field it isself-contained and on the bench its a two-port (S21) desktop machine when used with your PC. It powers itself with 3 AAA NiMh cells (not supplied), a USB port or external 12 VDC (such as the MFJ-1312D).

List $399.95 *Order #1135* **$349.95**

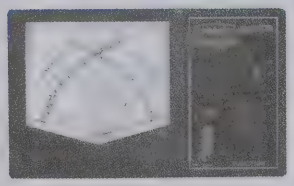
MFJ-818



The **MFJ-818** is a rugged, compact SWR/Wattmeter designed for the abuse of HF mobile and portable operation. 30/300 Watt ranges, 1.8-30 MHz 12 VDC required for meter illumination. SO-239 connectors. 5 x 3 x 2 inches.

List $79.95 *Order #4232* **$74.95**

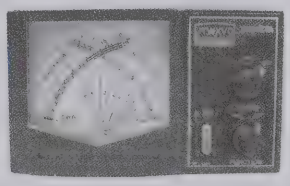
JETSTREAM JTWXHF



The **Jetstream JTWXHF** meter operates from 1.6 to 60 MHz with ranges of 20/200 & 2000 watts. It uses a true directional coupler for increased accuracy, and low bias Schottky diode detectors for increased linearity. The large cross needle meter simultaneously displays forward and reflected power with SWR. The LED back lighting provides smooth, even illumination. The metal cabinet with speckled black finish and grey injected molded front panel complements today's modern transceivers. Supplied with DC power cable. SO239 input and output. Requires 9-14 VDC at 200 mA.

List $119.95 *Order #5447* **$108.95**

JTWXVU



The **JTWXVU** is very similar but operates from 125-524 MHz with ranges of 2/20 and 200 watts.

List $119.95 *Order #5448* **$109.95**

MFJ-805

The **MFJ-805** pocket-sized RFI detector is used to track down RFI caused by radiating cables and wires. It will tell you exactly which cable is radiating RFI so you can eliminate it with a simple toroid or clamp-on RFI filter (not supplied). You can use it to find RFI generated by consumer devices, computers and high-tech office equipment. When you eliminate the RFI source, hash, birdies, whistles and transient noise miraculously disappear from your receiver. It also works with mobile installations, ferreting out alternator hash, ignition pulses and microprocessor noise on feedlines and power leads. The MFJ-805 is usable from VLF to VHF with gain adjustable over a 50dB range. At only 2.25 x 4.75 x 1 inches it fits in your shirt pocket. Requires 9V battery (not included).

List $99.95 *Order #4029* **$89.95**

MFJ-860

The **MFJ-860** cross-needle meter reads forward and reflected power and SWR simultaneously for 1.8 to 60 MHz up to 300 watts. Power ranges: 30/300 watts forward and 6/60 watts reflected. SO-239 jacks. For meter illumination use 12 VDC or optional MFJ-1312D adapter. 4.5x2.25x3 inches.

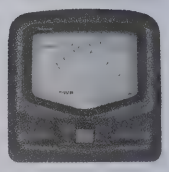
List $59.95 *Order #0977* **$54.95**

MFJ-266B

The **MFJ-266B** covers 1.5-5, 85-185 and 300-490 MHz. The 10:1 vernier drive and solid state varicap makes fine tuning a breeze, and a built-in diallock prevents accidental detuning. Switched backlighting makes LCD screen easy-to-read in any light. Requires eight AA NiMH or NiCad cells (not included), or may be operated from optional MFJ-1312D power supply. Draws 30 mA in counter mode and 140 mA in analyzer mode. Includes N-to-SO-239 adapter. 3.75 x 6.5 x 2.75" 1.32 lbs.

List $299.95 *Order #6031* **$269.95**
MFJ-1312D PS *Order #2433* **$15.95**

MFJ-842



The **MFJ-842** cross-needle meter reads forward and reflected power and SWR simultaneously. For 140 to 525 MHz, 15/150 watts forward and 5/50 watts reflected. Minimum input is 1 watt and accuracy is 10%. SO-239 I/O. Meter illumination if desired requires 12 VDC. 3.35 x 3.45 x 3.75 in.

List $59.95 *Order #4828* **$54.95**

MFJ-822

The **MFJ-822** is the same meter, but for HF/2M covering 1.8 to 200 MHz with 30 /300 Watt ranges.

List $59.95 *Order #4827* **$54.95**

MFJ-826B

The **MFJ-826B** digital SWR/wattmeter/frequency counter measures 100 milliwatts to 1500 Watts from 1.8 to 45 MHz! True peak or average forward and reflected Watts, SWR and frequency can be simultaneously displayed. You can also select auto-ranging bargraph modes or frequency, SWR and forward power can be displayed numerically. PeakHold™ feature freezes the highest forward power displayed bar segment for one second. Three ranges are automatically selected: QRP (to 25W), mid (250W) and high (1500W). Requires 12 VDC (or MFJ-1312D). 6.5 x 2.675 x 6".

List $179.95 *Order #5158* **$149.95**

MFJ-886B

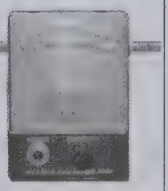
The **MFJ-886B** pocket sized frequency counter covers the amazing range of 300 Hz to 2.8 GHz. The 10 digit backlit LCD displays to 1 Hz and it has a n 11-segment RF signal strength bargraph. You can select from four selectable gate speeds. There is a built-in 800 mAh battery and a 12VDC output AC adapter is included. 2.5 x 3.25 x 1.2". List $129.95.

Order #6411 **$119.95**

MFJ-801

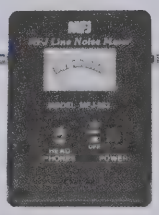
The **MFJ-801** field strength meter shows the strength of the actual field being radiated from your antenna. Usable from 100 kHz to 500 MHz. Has nonremovable 20 inch telescopic antenna. 2.4 x 3.7 x 1".
List $27.95 *Order #1015* **$27.95**

MFJ-802B



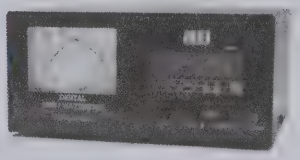
The **MFJ-802B** field strength meter shows the strength of the actual field being radiated from your antenna. Use it to determine the basic radiation pattern of your antenna and instantly know if it radiates better or worse. Check for RF floating around the shack caused by faulty antennas or poorly shielded equipment. For 100 kHz to 500 MHz. The telescoping 40 inch dipole antenna reduces influence of surrounding objects.
List $49.95 *Order #6222* **$44.95**

MFJ-852



The **MFJ-852** power line noise meter lets you search out leaky insulators, loose hardware and corroded ground lines quickly. You can track the noise source right down to the pole, transformer or insulator. Pinpoint faulty dimmers, electric fence arcs, sparking power equipment, neon signs and more! The MFJ-852 is a sensitive superhet AM receiver with a noise field strength meter. A telescopic, direction-finding dipole antenna is balun isolated and optimized for sharp, clearly defined nulls to pinpointing noise sources quickly. It operates in the 135 MHz region where activity is a minimum and radiation from corona and arcing is far more localized. 0.3 µV sensitivity and wide-range AGC give you an ultra wide range noise level meter - over 70dB! Plug in mono headphones and hear the noise you're tracking or plug in a tape recorder (headphones and tape recorder optional). Requires a 9V battery (not supplied).
List $119.95 *Order #4030* **$109.95**

MFJ-828

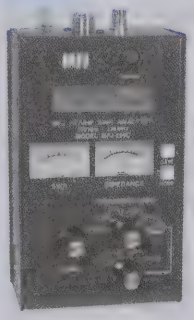


The **MFJ-828** digital SWR/wattmeter/frequency counter measures up to 1500 watts from 1.8 to 54 MHz. Requires 12 VDC at 250 mA.
List $249.95 *Order #5820* **$214.95**

MFJ-816

The **MFJ-816** HF SWR-wattmeter lets you read forward and reflected power from 1.8 to 30 MHz in ranges of 30 and 300 watts.
List $39.95 *Order #1214* **$34.95**

MFJ-259C



This **MFJ-259C** SWR analyzer features a built-in 10 digit LCD frequency counter. Easily read your antenna's SWR and find its resonance. Just connect your antenna, set the SWR analyzer to the frequency you want and read your SWR. Frequency coverage is from 0.53 to 230 MHz. Monitor your SWR as you adjust your beam or vertical. Shorten or lengthen your dipole to see the effect immediately. Includes a built-in RF Resistance Meter. Uses ten AA cells or MFJ-1312D PS (both optional).
List $289.95 *Order #6228* **$249.95**

MFJ-29D Case *Order #6286* **$23.95**
MFJ-66C Dip Coils *Order #1186* **$29.95**
MFJ-1312D PS *Order #2433* **$15.95**

MFJ-269C

The **MFJ-269C** is similar in looks and function to the MFJ-259C, but also covers 415-470 MHz plus a 12 bit A/D converter for greater accuracy. Requires ten AA NiMH or NiCad cells (not included). Optional MFJ-39D case *#6320* $22.95.
Order #1269 **$349.95**

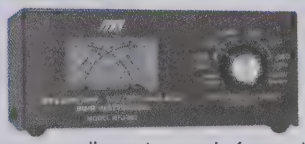
MFJ-224

Use the **MFJ-224** 2 Meter FM analyzer to tune any signal between 143.5-148.5 MHz to monitor field strength in dBm and FM deviation in kHz. Track down jammers fast with the high resolution 60 dB RSSI display. Amateur radio's most accurate S-meter. Requires a 9V battery (not included). 4 x 6.5 x 2.5".
Order #2636 **$159.95**

MFJ-868B

The huge **MFJ-868B** is the world's largest HF SWR/Wattmeter. This giant measures 6½ inches diagonally across the meter scale! MFJ's exclusive TrueActive™ peak reading circuit captures true peak or average forward and reflected power readings. The 1.8 to 60 MHz, 20/200/2000 Watt ranges makes it valuable for QRP or QRO operation. The Power Saver™ circuit turns on the meter only when RF power is being measured. It uses 9 volt battery (not supplied) or 12 VDC or optional MFJ-1312D.
List $149.95 *Order #6077* **$138.95**

MFJ-862



The **MFJ-862** cross-needle meter reads forward and reflected power and SWR simultaneously. This meter covers 144/220/440 MHz. Ranges: 30/300 watts forward and 6/60 watts reflected. Each power range for each band is individually calibrated. Single knob operation makes it easy to use. For meter illumination use external 12 VDC or optional MFJ-1312D (*Order #2433* $15.95).
List $69.95 *Order #0284* **$63.95**

MFJ-207

See the resonant frequency of your antenna without using a transmitter, SWR meter or any other equipment. A frequency counter output is provided for precise digital readout. Coverage is 10 - 160 meters. Requires 9V battery (not supplied) or optional MFJ-1312D.
List $109.95 *#2679* **$101.95**

MFJ-208

The same features of the MFJ-207, but over the frequency range of 138 to 156 MHz.
List $99.95 *Order #0244* **$94.95**

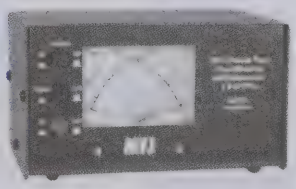
MFJ-209C

The **MFJ-209C** has same features of the MFJ-207 over the frequency range of 0.53 to 230 MHz.
List $199.95 *Order #0793* **$179.95**

MFJ-249C

The **MFJ-249C** is very similar to the MFJ-259C but *without* the two analog meters.
List $279.95
Order #6318 **$239.95**

MFJ-815D MFJ-817C



The **MFJ-815D** 1.8 to 30 MHz cross-needle peak-reading meter lets you monitor both forward and reflected power simultaneously. Select either Peak or Average reading with power ranges of 300/3000 watts forward and 60/600 watts reflected. The Peak Reading function of this meter requires external 12 VDC or a 9 volt battery (not supplied). The meter LED lamps will function with external 12 VDC, but not from a 9 volt battery. SO-239 for I/O.
List $89.95 *Order #2327* **$79.95**

The **MFJ-817C** is similar to the MFJ-815C above, but covers 144/220/440 MHz. instead of HF.
List $99.95 *Order #1858* **$89.95**

cushcraft BEAM ANTENNAS

You may view these antennas at:
www.universal-radio.com

Model	Frequency	Elements	Forward Gain	Boom	Weight	Wind L.	Order #	List Price	Your Price
A3S	20/15/10 Meters	3 Element	8.0 dB	14.0 feet	27 lbs.	4.4 sq/ft.	*#2779*	$599.95	**$559.95**
A4S	20/15/10 Meters	4 Element	8.9 dB	18.0 feet	37 lbs.	5.5 sq/ft.	*#0333*	699.95	**629.95**
A3WS	17/12 Meters	3 Element	8.0 dB	14.0 feet	23 lbs.	4.1 sq/ft.	*#0806*	499.95	**449.95**
A627013S	6/2M/70cm	3 Element	8/8/10 dB	7.3 feet	9.5 lbs.	2.5 sq/ft.	*#1333*	279.95	**249.95**
MA5B	20/17/15/12/10M			7.3 feet	27 lbs.	3.2 sq/ft.	*#3148*	499.95	**449.95**
TEN-3	28-29.7 MHz	3 Element	8.0 dB	8.0 feet	10 lbs.	2.0 sq/ft.	*#2740*	299.95	**269.95**
A50-3S	50-54 MHz	3 Element	8.0 dB	6.0 feet	7 lbs.	1.8 sq/ft.	*#1405*	139.95	**129.95**
A50-5S	50-54 MHz	5 Element	10.5 dB	12.0 feet	11 lbs.	2.9 sq/ft.	*#1406*	199.95	**189.95**
A50-6S	50-54 MHz	6 Element	11.6 dB	20.0 feet	18 lbs.	4.5 sq/ft.	*#1407*	399.95	**339.95**
A148-3S	144-148 MHz	3 Element	7.8 dB	2.8 feet	1.5 lbs.	0.3 sq/ft.	*#0685*	69.95	**66.95**
A148-10S	144-148 MHz	10 Element	13.2 dB	12.0 feet	6 lbs.	1.2 sq/ft.	*#1961*	139.95	**122.95**
A148-20T	144-148 MHz	20 Element	11.1 dB	11.0 feet	7 lbs.	.4 sq/ft.	*#1940*	219.95	**199.95**
13B2	144-148 MHz	13 Element	15.8 dB	15.0 feet	7 lbs.	1.8 sq/ft.	*#1357*	249.95	**229.95**
17B2	144-145 MHz	17 Element	18.0 dB	31.0 feet	16 lbs.	3.9 sq/ft.	*#1668*	369.95	**339.95**
26B2	144-148 MHz	26 Element	18.8 dB	15.0 feet	22 lbs.	4.9 sq/ft.	*#0836*	599.95	**549.95**
124WB	144-148 MHz	4 Element	10.2 dB	4.0 feet	3 lbs.	.4 sq/ft.	*#2905*	109.95	**104.95**
A270-6S	144-148/430-450	6 Element	7.8/7.8 dB	2.8 feet	1.7 lbs.	.3 sq/ft.	*#0158*	129.95	**117.95**
A270-10S	144-148/430-450	10 Element	10/10.0 dB	6.2 feet	1.8 lbs.	.7 sq/ft.	*#2402*	169.95	**149.95**
224WB	222-225 MHz	4 Element	10.2 dB	3.0 feet	1.7 lbs.	.3 sq/ft.	*#2821*	99.95	**92.95**
A430-11S	430-440 MHz	11 Element	13.2 dB	4.2 feet	4.0 lbs.	.4 sq/ft.	*#0652*	119.95	**107.95**
A449-6S	440-450 MHz	6 Element	10.5 dB	2.9 feet	3.0 lbs.	.3 sq/ft.	*#0628*	79.95	**71.95**
A449-11S	440-450 MHz	11 Element	13.2 dB	4.2 feet	4.0 lbs.	.4 sq/ft.	*#0629*	119.95	**109.95**
719B	430-450 MHz	19 Element	15.5 dB	13.5 feet	5.6 lbs.	1.2 sq/ft.	*#0711*	249.95	**229.95**

cushcraft VERTICAL ANTENNAS

You may view these antennas at:
www.universal-radio.com

Model	Frequency	Gain	Height	Weight	Wind L.	Order #	List Price	Your Price
R8	40/30/20/17/15/12/10/6M	3.0 dB	28.5 feet	23 lbs.	2.5 sq.ft.	*#0520*	$539.95	**$499.95**
R6000	20/17/15/12/10/6M	3.0 dB	19.0 feet	12.5 lbs.	1.5 sq.ft.	*#0869*	429.95	**379.95**
MA5V	20/17/15/12/10M	1.0-2.0 dB	14.7 feet	6.5 lbs.	0.9 sq.ft.	*#4287*	299.95	**259.95**
MA6V	20/17/15/12/10/6M	1.0-2.0 dB	14.7 feet	6.9 lbs.	0.9 sq.ft.	*#0849*	339.95	**309.95**
AR10	28-29.7 MHz	3.7 dB	17.6 feet	4.0 lbs.	1.7 sq.ft.	*#0635*	109.95	**94.95**
AR6	50-54 MHz	3.7 dB	10.1 feet	2.5 lbs.	0.4 sq.ft.	*#0634*	99.95	**91.95**
AR2	135-160 MHz	3.0 dB	3.9 feet	1.5 lbs.	0.2 sq.ft.	*#0633*	64.95	**59.95**
ARX2B	135-160 MHz	7.0 dB	14.0 feet	6.0 lbs.	0.5 sq.ft.	*#0642*	109.95	**104.95**
ARX220B	222-225 MHz	7.0 dB	9.3 feet	5.0 lbs.	0.3 sq.ft.	*#0644*	114.95	**105.95**
AR270	144-148/430-450 MHz	3.7/5.5 dB	3.8 feet	2.0 lbs.	0.3 sq.ft.	*#0583*	129.95	**119.95**
AR270B	144-148/430-450 MHz	5.5/7.5 dB	7.7 feet	2.4 lbs.	0.5 sq.ft.	*#1960*	189.95	**159.95**
AR450	440-460 MHz	3.7 dB	1.4 feet	1.0 lbs.	0.1 sq.ft.	*#0637*	47.95	**44.95**
ARX450B	435-450 MHz	7.0 dB	4.9 feet	1.0 lbs.	0.2 sq.ft.	*#0645*	99.95	**94.95**

GAP ANTENNA PRODUCTS

Universal is pleased to offer Gap antennas.

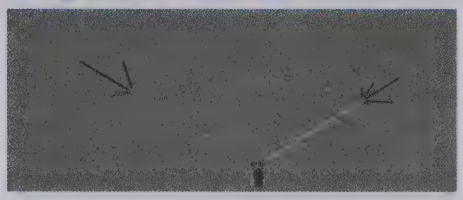
Challenger DX HF Vertical — *Order #4214*
80/40/20/15/12/10/6/2 Meters — **$367.95**

Eagle DX HF Vertical — *Order #4216*
40/20/17/15/12/10 Meters — **$389.95**

Titan DX HF Vertical — *Order #4213*
80/40/30/20/17/15/10 Meters — **$419.95**

Voyager DX HF Vertical — *Order #4215*
160/80/40/20 Meters — **$479.95**

COMET CHV-5X



The **Comet CHV-5X** five band rotatable trapped dipole has a compact design for installation even in antenna restricted locations. It covers 40, 20, 15, 10 and 6 meters. Its "V" configuration allows rotation in only a 7 foot radius! This lightweight multi-band antenna is a good choice for restricted areas or for portable or emergency situations. The CHV-5X has heavy elements to survive up to 92 MPH wind gusts. It has extruded aluminum mounting brackets, stainless steel U-bolts and hardware. Each coil has a tuning stub to set the SWR independent of the other bands. Includes CBL-2000 2.5kW Balun. Requires 1-2.5 inch mast (not included). Length 13 feet. Weight 5.8 lbs.
List $339.95 *Order #5783* **$319.95**

G3-144

An affordable 2 meter base vertical. Up to 200 watts. Gain is 3 dB. 7.5 ft.
List $79.00 *Order #0259* **$64.95**

G7-144

A high-performance 2 meter vertical for fixed station or repeater operation. Up to 600 watts. N-fitting. Gain is 7 dB. 15.3 ft. 10 lbs.
List $235.00 *Order #1972* **$209.95**

G6-144B

Solid construction and dependable performance make this antenna popular for 2 meter repeater applications. Up to 600 watts. SO-239. Gain is 6 dB. 9.9 ft. 6.8 lbs.
List $168.00 *Order #1971* **$149.95**

G6-270R

Experience superior fixed station or repeater performance with this VHF/UHF fiberglass vertical antenna. 144-148/430-450 MHz 100 Watts. Gain: 6 dB. 102 inches 6 lbs.
List $230.00 *Order #2918* **$219.95**

CGT-144

2 meter collinear trunk lip mount mobile antenna. Gain: 5.2 dB. Length: 7.1 ft. (2.2 m).
List $63.00 *Order #1967* **$52.95**

CGT-220

220 MHz collinear trunk lip mount mobile antenna. Gain: 5.2 dB. Length: 4.9 ft. (1.5 m).
List $63.00 *Order #1968* **$57.95**

MX-2

2 meter 5/8 wave magnetic mount mobile antenna with coax to PL259. 200W Gain: 3.4 dB. 55 inches.
List $39.95 *Order #4479* **$34.95**

MX-270

2 meter/440 MHz magnetic mount mobile antenna with coax to PL259. 200W 2.4/4.0dB. 44 inches.
List $64.75 *Order #4507* **$59.95**

RX-2

2 meter 5/8 wave magnetic mount mobile antenna with coax to PL259. 100W Gain: 3.4 dB. 50 inches.
List $29.95 *Order #0528* **$26.95**

SF-2

2 meter 5/8 wave "Buckbuster" mobile antenna. Gain: 3.4 dB. Height: 50 inches (1.3m).
List $17.75 *Order #1999* **$16.95**

SF-220

220 MHz 5/8 wave mobile antenna. Gain: 3.4 dB. Height: 31 inches (78 cm).
List $17.75 *Order #0834* **$16.95**

MKR-2

Radial Kit to convert mobile antennas to fixed station operation.
List $25.50 *Order #1977* **$23.95**

Accessories

These mounts accept a 3/8" 24 thread antenna.

Order #	Model	Item Description	List Price	Your Price
2067	GCM-1	Gutter Clip Mount with 180° Swivel	$16.00	$14.95
1975	HLM	Adjustable Trunk Lip Mount & 17' coax	26.25	22.95
1976	HOT	Quick Disconnect Trunk Mount & 17' coax	27.95	23.95
2556	MBM	Magnetic Mount & 16' coax	24.50	20.95
0187	RVM	RV Mount with 180° Swivel & 17' coax	24.75	22.95
2007	TLM	Trunk Lip Mount & 17' coax	25.95	23.95

4-BTV
5-BTV
6-BTV

4-BTV

This four band trap vertical features exceptional mechanical construction and full-band coverage (typical SWR 1.6:1 at band edges). For: 10, 15, 20 and 40 meters. 21.5 ft. 15 lbs.
List $188.00 *Order #2010* **$169.95**

5-BTV

You will have full-band coverage on 10-40 meters (1.6:1 at band edges typical) with this five band trap vertical. For: 10, 15, 20, 40 and 75/80 meters. 24.5 ft. 17 lbs.
List $235.00 *Order #2011* **$199.95**

6-BTV

Constructed of 1¼" heavy wall aluminum this six band trap vertical will handle the full legal limit of power on SSB or CW. For: 10, 15, 20, 30, 40 and 75/80 meters. 24 ft. 16.5 lbs.
List $270.00 *Order #2012* **$229.95**

30-MTK

30 meter add-on kit for the 4BTV or the 5BTV.
List $50.00 *Order #2021* **$39.95**

All antennas may be viewed at:
www.universal-radio.com

Mobile HF Antennas

Standard Resonators (400W)

Order #	Model	Item Description	Approx. Bandwidth	List Price	Your Price
1984	RM-10	10 Meter Resonator	150-250 kHz	$19.00	$16.95
2142	RM-12	12 Meter Resonator		19.00	16.95
1987	RM-15	15 Meter Resonator	100-150 kHz	19.00	16.95
2363	RM-17	17 Meter Resonator		27.00	21.95
1989	RM-20	20 Meter Resonator	80-100 kHz	27.00	21.95
1991	RM-30	30 Meter Resonator	50-60 kHz	29.25	23.95
1992	RM-40	40 Meter Resonator	40-50 kHz	29.25	23.95
2782	RM-60	60 Meter Resonator		32.50	26.95
2696	RM-75	75 Meter Resonator	25-30 kHz	32.50	26.95
2825	RM-80	80 Meter Resonator	25-30 kHz	32.50	26.95

Super Resonators (1KW)

Order #	Model	Item Description	Approx. Bandwidth	List Price	Your Price
1985	RM-10-S	10 Meter Resonator	250-400 kHz	$27.00	$21.95
1988	RM-15-S	15 Meter Resonator	150-200 kHz	30.00	22.95
1990	RM-20-S	20 Meter Resonator	100-150 kHz	34.00	26.95
2463	RM-40-S	40 Meter Resonator	50-80 kHz	43.00	31.95
1697	RM-75-S	75 Meter Resonator	50-60 kHz	59.95	48.95
2411	RM-80-S	80 Meter Resonator	50-60 kHz	59.95	48.95

Accessories

Order #	Model	Item Description	List Price	Your Price
1963	BM-1	Bumper Mount	$27.00	$22.95
1964	C-29	Stainless Steel Spring 3/8" 24	25.95	22.95
1944	C-30	Chrome Plated Spring 3/8" 24	16.50	15.95
1965	C-32	Chrome Plated Ball Mount	22.50	19.95
1981	MO-1	Mobile Mast 15" Fold Point	39.95	33.95
1982	MO-2	Mobile Mast 27" Fold Point	39.95	33.95
1206	MO-3	54" Mobile Mast	29.95	25.95
2120	MO-4	22" Mobile Mast	24.25	19.95
0696	QD-2	Quick Disconnect 3/8" 24	25.50	19.95
2306	RSS-2	Resonator Spring 3/8" 24	14.50	11.95
0187	RVM	RV Mount with Swivel Ball	24.75	22.95
2003	SSM-1	Ball Mount and Spring	56.50	46.95
2004	SSM-2	Ball Mount	33.75	26.95
2005	SSM-3	Stainless Steel Spring 3/8" 24 Heavy duty.	31.00	26.95

COMET

HF Base Antennas

CHA250B

This broadband vertical antenna amazingly covers 75/80 meters through 6 meters with no gaps! Transmit range is 3.5-57 MHz and receive range is 2-90 MHz. SWR <1.5:1. This 23.5 foot vertical requires no radials and weighs only 7.1 lbs. The antenna consists of five sections of aluminum tubing that slide into each other. The bottom section has the matching network built-in. Very easy assembly. It can handle 250 watts SSB and 125 watts FM. SO-239 input. Rated 67 MPH wind.
List $469.00 *Order #2396* **$429.95**

VHF/UHF Base Antennas

GP-3

Single section, fiberglass vertical base antenna is for 2 meters/440 MHz. Gain: 4.5/7.2 dB Power: 200 watts, SO-239 Height: 5.9 feet.
List $104.95 *Order #3901* **$101.95**

GP-6

Dual section, fiberglass vertical base antenna is for 2 meters/440 MHz. Gain: 6.5/9.0 dB Power: 200 watts, SO-239 Height: 10.3 feet.
List $169.95 *Order #3900* **$159.95**

GP-9

Triple section, fiberglass vertical base antenna is for 2 meters/440 MHz. Gain: 8.5/11 dB Power: 200 watts, SO-239 Height: 17.8 feet.
List $219.95 *Order #3899* **$207.95**

GP-15

Single section, fiberglass vertical base antenna is for 6 meters/2 meters/440 MHz. Gain: 3.5/6.2/8.6 dB Power: 150 watts, SO-239 7.9 feet.
List $174.95 *Order #3902* **$159.95**

GP-98

Double section, fiberglass vertical base antenna is for 2 meters/440 MHz/1200 MHz. Gain: 6.5/9.0/13.5 dB. Power: 150/150/100 watts. N 9.8 feet.
List $209.95 *Order #4780* **$199.95**

VHF/UHF Mobile Antennas

UHV4

Mobile quad-bander for 10, 6 and 2 meters plus 70 cm. 54 inches, fold-over with PL259 [M] connector. Mobile base & coax are not included.
List $119.95 *Order #3248* **$111.95**

UHV6

Mobile quad-bander for 6M/2M/70cm with 3 supplied coils for adding 40, 15 *or* 10 meters. ½ wave on 2M: 2.15dBi gain over a ¼ wave and it's 2 5/8 waves in phase on 70cm: 5.5dBi. Mobile base & coax are not included. Optional elements **L-3.5** 80 meters, **L-14** 20 meters or **L-18** 17 meters.
List $169.95 *Order #4289* **$159.95**

B10 / B10NMO

The **B10** 2 meter/440 MHz mobile antenna provides gain of 2.15 dBi/2.15dBi. VSWR <1.5:1. 50W. Has a black, cellular appearance. Connector type is UHF (for PO mount). 12 inches tall.
List $42.95 *Order #3918* **$39.95**

The **B10NMO** is same but for an NMO mount.
List $42.95 *Order #3919* **$40.95**

SBB1 / SBB1NMO

The **SBB1** 2 meter/440 MHz mobile antenna is a 1/4 wave on 2 meters with 1.5 dB gain and a 3 x ½ wave on 440 MHz providing 2.15 dB gain. VSWR <1.5 : 1 or less. 60W. Flexible 16.5 inches. PO.
List $42.95 *Order #3914* **$39.95**

The **SBB1NMO** is same but for an NMO mount.
List $42.95 *Order #3915* **$40.95**

SBB2 / SBB2NMO

The **SBB2** 2 meter/440 MHz mobile antenna is a 1/4 wave on 2 meters providing 2.15 dB gain and a 5/8 wave on 440 MHz with 3.8 dB gain. VSWR <1.5 : 1. 60W. Flexible 18 inches. For PO mount.
List $42.95 *Order #3912* **$39.95**

The **SBB2NMO** is same but for an NMO mount.
List $42.95 *Order #3913* **$40.95**

SBB5 / SBB5NMO

The **SBB5** 2 meter/440 MHz mobile antenna is ½ wave on 2 meters providing 3 dB gain and a 2 x 5/8 wave on 440 MHz providing 5.5 dB gain. VSWR <1.5 : 1. 120W. 38 inches with fold-over. For PO.
List $58.95 *Order #3910* **$53.95**

The **SBB5NMO** is same but with an NMO mount.
List $58.95 *Order #3911* **$54.95**

SBB7 / SBB7NMO

The **SBB7** 2 meter/440 MHz mobile antenna is a 5/8 wave center load on 2 meters with 4.5 dB gain and a 3 x 5/8 wave on 440 MHz with 7.2 dB gain. VSWR <1.5:1. 70W. 55 inch with fold-over. PO.
List $79.95 *Order #3908* **$72.95**

The **SBB7NMO** is same but for an NMO mount.
List $79.95 *Order #3909* **$73.95**

SBB224 / SBB224NMO

This 2 meter, 220 and 440 MHz mobile antenna is a 1/4 wave on 2M, a 5/8 wave on 220 and ½ wave x 2 on 440 MHz. It provides gain of 2.15/3.6/6.0 dBi. VSWR <1.5:1. 100W. 36 in., Black. For PO.
List $79.95 *Order #3920* **$71.95**

The **SBB224NMO** is same but with an NMO mount.
List $79.95 *Order #3921* **$72.95**

SBB25 / SBB25NMO

The **SBB25** 2 meter mobile antenna is 5/8 wave with 4.1 dB gain. 100W. 56 inches. Black. For PO.
List $52.95 *Order #3904* **$47.95**

The **SBB25NMO** is same but for an NMO mount.
List $52.95 *Order #3905* **$48.95**

SB114

This 6 meter, 2 meter and 440 MHz mobile antenna handles 120W. 42 inches. For PO mount.
List $67.95 *Order #5882* **$62.95**

SBB15

This 6 meter, 2 meter and 440 MHz mobile antenna handles 120W. 58 inches. For PO mount.
List $89.95 *Order #3031* **$81.95**

CA-2x4SR / CA-2x4SRNMO

This 2 meter/440 MHz mobile antenna is a 5/8 wave on 2 meters and a 5/8 wave on 440 MHz. Gain 3.8 /7.2 dB. VSWR <1.5 : 1 or less. 150W. 40 inches. For PO mount.
List $69.95 *Order #3907* **$60.95**

The **CA-2x4SRNMO** same but for an NMO mount.
List $69.95 *Order #5655* **$61.95**

CSB750A/770A/790A

The heavy-duty Comet CSB 2 meter/440 MHz mobile antennas provide wide frequency range and have a fold-over hinge. Power is 150 watts. They terminate to a PL-259 base and require a PO mount. Mount and coax sold separately.

CSB-750A Gain: 3.6/6.1 dBi Length: 42 inches.
List $74.95 *Order #4781* **$66.95**

CSB-770A Gain: 4.4/6.9 dBi Length: 51 inches.
List $89.95 *Order #4782* **$84.95**

CSB-790A Gain: 5.1/7.7 dBi Length: 62 inches
List $119.95 *Order #4783* **$104.95**

These antennas do *not* include coax or mount. For mount information and photos call or visit:
www.universal-radio.com

HT Antennas

SMA3

2m/440/900 MHz SMA HT antenna is 9.75 inches with a fold-over hinge. Gain is a 1.2/1.7/3.4 dBi. 10 watts. Also very good for wideband receive.
List $39.95 *Order #2975* **$34.95**

CH-32 / SMA-501

The CH-32 M*iracle Baby* is an ultra small BNC HT antenna for 2 m/440 MHz. It is only 1.75" tall. It is a 0 dBi 1/4 wave and can handle up to 10 watts.
List $29.95 *Order #3938* **$26.95**

The SMA-501 is similar to the CH-32, but SMA.
List $29.95 *Order #3934* **$25.95**

CH-75

The Comet CH75 2M/440 HT BNC antenna is 15 inches tall and flexible. Gain is a 0/.32 dBi. 20 W.
List $25.95 *Order #3939* **$22.95**

HT-224

The Comet HT-224 is tri-band HT antenna for 2 meters, 220 and 440 MHz . It is a favorite with TH-F6A owners. 11.5 inches flexible. Gain is: 1.3/1.4/1.8 dBi. For up to 10 watts. Also good for wideband receive: 118-160, 180-280 and 360-520 MHz. Black color. Terminates to an SMA. 50 ohms.
List $47.95 *Order #4462* **$42.95**

DIAMOND

VHF/UHF Base Antennas

F-23H

High-performance 5/8 x 3 wave 2 meter vertical antenna. Gain: 7.8 dB. Power rating: 350 watts Length: 178.3" Weight: 8 lbs. Connector: UHF.
List $148.95 *Order #5119* **$139.95**

X-50A

Compact dual-band vertical antenna. Frequency: 2 meter and 70cm. Gain: 4.5 dB (2m), 7.2 dB (70cm) Power rating: 200 watts Length: 67" Weight: 2.3 lbs. Connector: UHF.
List $99.95 *Order #2553* **$89.95**

X-200A

High-performance dual-band vertical antenna for fixed station or repeater operation. Frequency: 2 meter and 70cm. Gain: 6.0 dB (2m), 8.0 dB. (70cm) Power rating: 200 watts Length: 98.4" (2.5m) Weight: 2.6 lbs (1.2 kg). Connector: UHF.
List $129.95 *Order #2341* **$119.95**

X-300A

An ideal antenna for FM operation on 2 meters (2 x 5/8 wave) and 440 MHz (5 x 5/8 wave) bands. A 2 section fiberglass antenna featuring stainless steel hardware. Frequency: 2 meter and 70cm. Gain: 6.5 dB (2m), 9.0 dB. (70cm) Power rating: 200 watts Length: 10 foot, Connector: UHF.
List $139.95 *Order #4809* **$129.95**

X-510HDN

This high-gain dual-band vertical antenna is ideal for high-performance base station or repeater operation. Frequency: 146-148 / 440-450 MHz. Gain: 8.3 / 11.7 dB. Power rating: 230/250 watts. Length: 204.7" 5.3 lbs. Connector: N. 90 MPH.
List $199.95 *Order #5189* **$189.95**

X-510HDM

This antenna is the same as the X-510HDN listed above, but with an UHF (SO239) rather than an N.
List $209.95 *Order #3503* **$199.95**

X-3200A

The triband 2M/220/440 MHz provides 6/7.8/8 dB gain. Power: 100 watts. Length: 10' 6" Weight: 4 lbs. Connector: UHF (SO239) Wind: 112 MPH.
List $209.95 *Order #3094* **$189.95**

V-2000A

A true high-performance 2 meter, 6 meter and 70cm triband vertical antenna. Gain: 6.2 dB. (2m), 2.15 dB. (6m), 8.4 dB. (70cm). Power rating: 150 watts Length: 98.4" 2.65 lbs. Connector: UHF.
List $169.95 *Order #0153* **$159.95**

- Diamond base antennas are made with a rugged fiberglass sheath and stainless steel hardware.
- For Diamond antennas and accessories not listed, please call or visit our website.

✔ Please see the **Icom AH8000** on page 45.

VHF/UHF Mobile Antennas

NR-770HNMO

High-performance 2 meter/70cm dual-band mobile antenna. Gain: 3.0 dB/5.5dB. Power rating: 200 watts. Length: 39" 0.46 lbs Mount: NMO.
List $53.95 *Order #1915* **$49.95**

NR-770HA

Same as NR-770HNMO but with a PO mount.
List $55.95 *Order #2568* **$49.95**

NR-72BNMO

A great compact dual-band mobile antenna. Gain: 2.15 dB.-2m, 2.15 dB.-70cm. Power rating: 100 watts. Length: 14" (356mm) Black. Mount: NMO.
List $44.95 *Order #1578* **$39.95**

NR-73BNMO

A great, compact dual-band mobile antenna. Gain: 2.15 dB.-2m, 5.3 dB.-70cm. Power rating: 100 watts. Length: 34" (863mm) Black. Mount: NMO.
List $57.95 *Order #0299* **$51.95**

SG-7500A

High-performance dual-band mobile antenna. Gain: 3.5 dB. (2m), 6.0 dB. (70cm). Power: 150 W. Length: 41" Wt: .8 lbs. Mount: PO (SO-239).
List $69.95 *Order #2366* **$64.95**

SG-7900A

Maximum performance 2M/440 mobile antenna. Gain: 5.0 dB/7.6 dB. Power rating: 150 watts Length: 62" Weight: .8 lbs. Mount: PO (SO-239).
List $109.95 *Order #0142* **$107.95**

CR-320A

The CR-320A triband is a 2 meter, 220 MHz and 440 MHz black mobile antenna. Gain is 2.15/3.8/5.5 dB. This antenna can handle up to 200/100/200 watts. 34 inches high. Mount: PO (SO-239).
List $79.95 *Order #3095* **$74.95**

CR-8900A

The Diamond CR-8900A quadband is a 10 meter, 6 meter, 2 meter and 440 MHz mobile antenna. It is a 1/4 wave on 10 and 6 meters and a 1/2 wave on 2 meters (2.15 dBi) and a 2 x 5/8 wave on 440 MHz (5.5 dBi). For up to 60 watts FM. 50 inches tall and weighs 18 oz. The connector type is UHF (for PO mount). Not recommended for a magnet mount. A great match for the FT-8900R.
List $109.95 *Order #2123* **$104.95**

CR-627B / CR627BNMO

The Diamond CR-627B triband antenna is a 1/4 wave on 6 meters providing 2.15 dB gain and a 3 1/4 wave on 2 meters providing 4.5 dB gain and a 3 5/8 wave on 440 MHz providing 7.2 dB gain. For up to 120 watts. 60 inches. Connector type is UHF (for PO mount). Not for magnet mounts.
List $109.95 *Order #2062* **$100.95**

CR-627BNMO is identical, but with NMO mount.
List $109.95 *Order #3093* **$101.95**

HT Antennas

RH77CA / SRH77CA

This flexible BNC HT 6dB gain antenna provides ¼ wave on 2 m and ½ wave on 70 cm. Also a favorite among scanner buffs and those using handheld wideband receivers. 16 inches.
List $24.95 *Order #2368* **$21.95**

The Diamond SRH77CA is similar, but terminates to an SMA. *Order #0491* **$23.95**

SRH519 / RH519

The flexible Diamond SRH519 2 meter/440 HT antenna is only 8.5" with 3 dBi gain, up to 10 watts. Very effective as a receive antenna for these bands: 150, 300, 450 and 800 MHz. SMA.
List $26.95 *Order #3502* **$22.95**

The Diamond RH519 is the same, but features a BNC rather than an SMA connector.
List $24.95 *Order #3061* **$19.95**

RH789 / SRH789

The Diamond RH789 is an omnidirectional telescoping antenna for 95 MHz to 1100 MHz. It acts as a 1/4 wave from 95 to 300 MHz and a 5/8 wave from 300 to 1100 MHz. It can be used for transmit up to 10 watts. This black, six section antenna, with hinged base, is 7.9 inches retracted and 31.7 inches extended. Gain is 2.15 dBi from 95-300 MHz and 3.2 dBi from 300-1100 MHz. It terminates to a male BNC.
List $34.95 *Order #1204* **$29.95**

The Diamond SRH789 is similar, but terminates to an SMA.
List $34.95 *Order #4845* **$30.95**

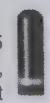
SRH999

The Diamond SRH999 is a quad-band HT antenna that is 20 inches tall and weighs only 2 ounces. The SRH999 is a 1/4 wave on 6 and 2 meters, a 1/2 wave on 430 MHz and a 5/8 wave on 1.2 GHz. Power is up to 10 watts. This antenna terminates to a 50 ohm SMA. Also suitable for wideband receivers which feature an SMA connector. It is also optimized for receive on 150, 300, 450 and 900 MHz bands. Flexible, black.
List $59.95 *Order #4463* **$55.95**

RH707

The Diamond RH707 is an HT antenna for 2 meters and 440 MHz. It is 8.5 inches tall and has a unique hinge at the base. This flexible "tilt" antenna is black. Gain is 3 dBi and it can handle up to 10 watts. Terminates to a 50 ohm BNC.
List $29.95 *Order #1873* **$25.95**

SRH805



The Diamond SRH805 is a black, tiny, 1.75 inch tall tri-band HT antenna for 2 meters, 440 MHz and 1.2 GHz. Gain is -2 dBi and it can handle up to 6 watts. Terminates to a 50 ohm SMA. It is also effective as a receive antenna for these bands: 150, 300, 450, 800 and 900 MHz
List $28.95 *Order #3317* **$26.95**

MX Series Duplexers

MX-62M

LPF: 1.6-56 MHz, HPF: 76-450 MHz. Mix: SO239. Port: two 12" coax to PL259s.
List $69.95 *Order #2720* **$64.95**

MX-72D

LPF: 1.6-30, 140-150 MHz, HPF: 400-460 MHz. Mix: SO239. Port: two PL259 plugs.
List $46.95 *Order #2573* **$39.95**

MX-72H

LPF: 1.6-30, 140-150 MHz, HPF: 400-460 MHz. Mix: SO239. Port: two 12" coax to PL259s.
List $49.95 *Order #2571* **$44.95**

MX-72N

LPF: 1.6-30, 140-150 MHz, HPF 400-460 MHz. Mix: SO239. Port: 12" coax to PL259, 12" coax to N.
List $49.95 *Order #2563* **$45.95**

MX-610

LPF: 1.3-30 MHz, HPF: 49-470 MHz. Mix: SO239. Port: two 12" coax to PL259s.
List $69.95 *Order #1704* **$67.95**

MX-2000 TRIPLEXER

LPF: 1.6-160, 110-170 MHz, HPF: 300-950 MHz. Mix: S0239. Port: two 12" coax to PL259s.
List $83.95 *Order #2681* **$79.95**

Mobile Mounting Brackets

K-400

Diamond deluxe adjustable hatchback-trunklid mount ½" hole with NO connector or cable.
List $39.95 *Order #0978* **$36.95**

K-400C

Deluxe adjustable hatchback-trunklid mount with 6 feet of low-loss cable and connector. SO239.
List $73.95 *Order #2072* **$69.95**

K-400CNMO

Deluxe adjustable hatchback-trunklid mount with 6 feet of low-loss cable and connector. NMO.
List $73.95 *Order #1250* **$68.95**

K-400-3/8C

Deluxe adjustable hatchback-trunklid mount with 6 feet of low-loss cable and connector. 3/8x24.
List $73.95 *Order #4504* **$69.95**

K-540

Black swivel mirror mount ½" hole. No cable.
List $36.95 *Order #0573* **$34.95**

K-540KM

Black swivel mirror mount with 13 feet of RG58AU and PL259. SO-239 type mount.
List $59.95 *Order #1933* **$54.95**

DIAMOND D220

The **Diamond D220** mini discone antenna receives solid from 100 to 1600 MHz! It can also be used for transmit on 144, 430, 904, 1200 MHz (under 50 watts). Gain is 2.15dBi (144/904/1200MHz) and 5.5dBi (430MHz) VSWR <1.5:1. This omnidirectional , stainless steel antenna is 35.5 inches (with a 8.5 inch max. diameter). The mast and mount are not supplied. Weight is 1.2 lbs. The D220 terminates to a 50 ohm male UHF [PL259] to fit into PO type mounts, thus making it appropriate for some mobile applications.
List $113.95 *Order #0312* **$103.95**

RHF40

The **Diamond RHF40** is a strange HT antenna for 2 meters and 440 MHz. The top 13 inches of the antenna is completely flexible and can be twisted into almost any shape. The total length of the antenna is 16 inches. It is a ¼ wave on 2 meters and a ½ wave on 70 cm. It can handle up to 10 watts. It is also a capable wideband receive antenna for: 120/150/300/450/800/900 MHz. BNC base.
List $27.95 *Order #0795* **$24.95**
The **SRHF40** is the same but with an SMA base.
List $26.95 *Order #4730* **$23.95**

SRH320A

The **Diamond SRH320A** is a semi-flexible, black, tri-band HT antenna for 2 meters (¼w), 220 (¼w) and 430 MHz (½w). 13.5 inches tall and can handle 10 watts. Has an SMA connector. Optimized for receive on 120, 150, 300, 450 and 900 MHz.
List $46.95 *Order #0454* **$42.95**

RH205

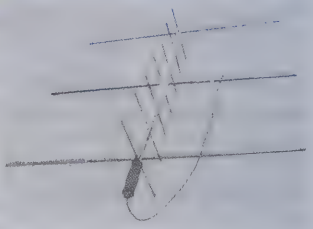
The **Diamond RH205** is not compact or cool looking . It is just a big 47.5 inch 5/8 wave 2 meter telescopic antenna with huge +9.5 dB relative gain! Collapses to a 9 inch ¼ wave. 10W BNC.
List $26.95 *Order #0786* **$22.95**

DIAMOND HFV5

The **Diamond HFV5** five band rotatable trapped dipole has a compact design for installation even in antenna restricted locations. It covers 40, 20, 15, 10 and 6 meters. This lightweight multiband antenna is a good choice for restricted areas or for portable or emergency situations. 150W SSB on 40/20, 200W SSB on 15/10/6m. Requires 1-2.5 inch mast (not included). Length 13 feet. 4.3 lbs.
List $339.00 *Order #6098* **$299.95**

Arrow Antenna

146/437-10WBP



Can you work an amateur satellite with an HT? Yes you can with the **Arrow 146/437-10WBP** satellite antenna! The boom is 3/4 inch aluminum with rounded corners. It is 37 1/2 inches long. On this "split" version the longest piece is 22 inches. Weight is only 20 ounces. Under the handy foam grip, the boom is drilled and tapped for 1/4 x 20 for most camera tripods. It features preset dual gamma match. Your radio has only one BNC connector. The antenna has two. Therefore, this configuration includes the 10 watt duplexer and also has the coax cables to connect your radio to the antenna. This duplexer lets you hear the down link while transmitting.
146/437-10WBP *Order #3049* **$144.95**

Arrow Antenna

OSJ146/440

The **Arrow OSJ146/440** is an open-stub J Pole dual-band vertical covering 143-149 and 430-450 MHz with an SWR of less than 1.5 to 1. This heavy duty 58 inch antenna is made from 3/8 inch solid aluminum and features a heavy-duty angle mounting bracket and stainless steel hardware. It has an SO-239 jack. With U bolt assembly.
OSJ146/440 *Order #4636* **$47.95**

COMET H-422

The **Comet H-422** quad-band is a rotatable trapped dipole with a compact design for installation even in antenna restricted locations. It covers 40, 20, 15 and 10 meters. It can be easily assembled in either a "V" or "straight" configuration. In the "V" shape, good performance is achieved at a minimum of 10 feet above ground! The H-422 has heavy wall tubing to survive up to 67 MPH wind speeds. It has extruded aluminum mounting brackets, stainless steel U-bolts and hardware. The three predrilled radiator lengths are provided for easy tuning. Includes CBL-2000 2kW Balun. VSWR: 1.5:1 or less at center. Wind Load 9.9 square feet. Length: 24.5 feet "V", or 33.8 feet "straight". 12 lbs.
List $399.95 *Order #4778* **$359.95**

M24M / M24S / M24SJ

The **Comet M-24M** 2 meter / 440 MHz mobile antenna is only 19.5 inches high including the *supplied* magnet mount. With 12.5 feet of RG-58A/U to a PL-259. Gain is 1.7/4.15 dBi. VSWR < 1.5. For up to 80 watts. All black.
List $42.95 *Order #2818* **$37.95**

The **M24S** is the same, but with an SMA plug.
List $42.95 *Order #1020* **$38.95**

The **M24SJ** is the same, but with an SMA-J plug.
List $42.95 *Order #5589* **$39.95**

Princeton G5RV

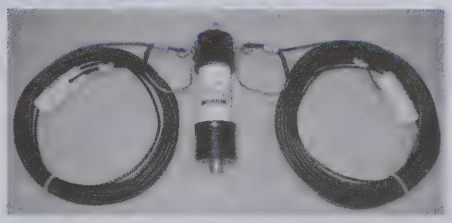
Princeton G5RV quality antennas feature hard drawn 14 gauge wire and UV protected center insulators. It consists of a flat top plus a section of 450 ohm ladder line. In this instance, the ladder line is an active part of the antenna and radiates RF. A broad range automatic tuner such as those made by LDG will provide an excellent match to modern transceivers.

G5RV Classic, 80-10M 1500W PEP, 102 feet.
G5RV *Order #5118* **$59.95**

G5RV Junior, 40-10M, 1500W PEP, 51 feet.
G5RV JR *Order #5153* **$54.95**

G5RV Mini, 20-10M, 1500W PEP, 26 feet.
G5RV MINI *Order #5154* **$52.95**

Princeton WINDOM



The classic **Windom** antenna is an off center feed dipole that, by design, operates on its frequency of resonance and harmonically related frequencies. It is extremely efficient and highly regarded by QRP operators. The addition of a quality tuner ensures a good match to all modern transceivers. The antenna is made with Flex-Weave black jacketed antenna wire and 4:1 balun. Maximum power is 200 watts PEP. The PRI 80WIN is shown.

Model	Band	Length	Order#	Price
PRI 40WIN	40 Meters	67 ft.	*#5692*	**$119.95**
PRI 80WIN	80 Meters	131 ft.	*#4991*	**149.95**
PRI 160WIN	160 Meters	246 ft.	*#5115*	**179.95**

ALPHA DELTA

DX-A

This 40, 80 and 160 meter twin sloper is broadbanded and easy to tune. Length is 115 feet.
DX-A *Order #0378* **$98.95**

DX-B

This sloper is designed for the ham and operates on 160 - 30 meters. Only 60 feet (18.3m) long.
DX-B *Order #1041* **$108.95**

DX-CC

This "No Trap" dipole for 10, 15, 20, 40 and 80 meters is only 82 feet (25m) long.
DX-CC *Order #1031* **$158.95**

DX-DD

For limited space installations this *no trap* shortened dipole for 40 and 80 meters does it in 82 ft.
DX-DD *Order #0675* **$128.95**

DX-EE

This shortened *no trap* dipole for 10, 15, 20 and 40 meters is only 40 feet (12.2m) long.
DX-EE *Order #1905* **$138.95**

DX-20/40/80

Alpha-Delta offers single band dipoles rated at 2 kW. With gray PVC covered 12 g. solid copper wire, DELTA-C center insulator and 40 ft. of rope.

Model	Band	Length	Order#	Price
DX-20	20 Meters	34 feet	*#3452*	**$68.95**
DX-40	40 Meters	67 feet	*#3453*	**$68.95**
DX-80	80 Meters	134 feet	*#3454*	**$68.95**

LARSEN ANTENNAS

NMO-150C

5/8 wave 2 meter mobile antenna. 144 to 148 MHz Gain: 3.0 dB. Mount: NMO. Whip: W490.
List $37.05 *Order #0850* **$27.95**

NMO-150B

Same as above but black coil and W490B whip.
List $41.55 *Order #1792* **$29.95**

NMO-150C HW

1/2 wave 2 meter mobile antenna. 144 to 174 MHz Gain: 2.5 dB. Mount: NMO. Whip: W490.
List $64.75 *Order #0822* **$47.95**

NMO-150B HW

1/2 wave 2 meter mobile antenna. Black coil and W490B whip. 200 watts. 52 inches. Mount: NMO.
List $69.25 *Order #4280* **$49.95**

NMO-150C HW

1/2 wave 2 meter mobile antenna. Black coil and W490 whip. 200 watts. 52 inches. Mount: NMO.
List $64.75 *Order #0822* **$47.95**

Maldol NS-146

The **Maldol NS-146** is an economy 2 meter HT antenna. Black, 4 inch long with a BNC plug.
List $14.95 *Order #0846* **$11.95**

NMO-2/70B

2 Meter/440 mobile antenna. Gain: 1.6/3.5 dB. W2/70B Black whip. Mount: NMO (Motorola).
List $95.00 *Order #4278* **$69.95**

NMO-2/70C

2 Meter/440 mobile antenna. Gain: 1.6/3.5 dB. W2/70 chrome whip. Mount: NMO.
List $92.75 *Order #2852* **$69.95**

NMO-QC

1/4 wave 2 meter mobile antenna. W200 whip.
List $23.10 *Order #1067* **$16.95**

NMO-QB

Black 1/4 wave 2 meter mobile antenna. W200B.
List $24.70 *Order #0764* **$18.95**

NMO-220C

220 MHz 5/8 mobile antenna. Gain: 3.0 dBd. W400 chrome whip. Mount: NMO.
List $53.40 *Order #1266* **$36.95**

OPEK HF-BD1

The **Opek HF-BD1** is an HF folded dipole covering 2 to 30 MHz continuously. Power capacity is 150 watts. This antenna comes with 98 feet of coaxial cable that terminates to a PL-259 connector.
List $239.00 *Order #5905* **$199.95**

Mounts & Accessories

Order #	Model	Item Description	List Price	Your Price
2182	**BNCMMBNC**	Mag-mount with BNC Connectors both ends	$65.00	**$42.95**
2747	**NMOCAPB**	Rain Cap for NMO Type Mounts - Black	6.20	**4.95**
1274	**NMOK**	3/4" Hole NMO Style Mount	26.40	**19.95**
4282	**NMOMM**	Rectangular Mag-Mount for NMO Antennas	76.95	**49.95**
0467	**NMOMMR**	Round Mag-Mount for NMO Antennas	40.50	**31.95**
1277	**NMOTLP**	Trunk Lip Mount for NMO Antennas	40.75	**29.95**
3629	**POKNOCONN**	3/4" Hole Mount for PO (SO-239) Ant. RG-58	53.90	**35.95**
5332	**PO-MM**	Square Mag-Mount for PO (SO-239) Ant. RG-58	57.20	**39.95**
2781	**SPRING**	Shock Spring Chrome	18.21	**13.95**
1077	**TMB-34**	Stainless Steel "L" Trunk Bracket With 3/4" Hole	7.25	**5.95**
4284	**TMB-34B**	Black Steel "L" Mount Bracket With 3/4" Hole	10.93	**8.95**

SOLARCON ANTENNA RESEARCH A99

The **Solarcon A99** is a half wave over a quarter wave variable mutual inductance antenna for 10 to 17 meters. It features the Solarcon twin ring *Adjust-A-Match* system to obtain the optimum SWR. The rugged three-piece white fiberglass construction features triple plated brass fittings. 17.75 feet high. 3 dBi gain, power limit is 2000 watts. Accepts PL-259 and mounts on a 1.5" mast (not supplied).
A99 *Order #1001* **$84.95**

Optional ground radial kit available.
GPK1 *Order #2490* **$58.95**

HY POWER QRP DIPOLES

Hy Power QRP Dipoles are rated at 150 watts (not 1500!). But 150 watts is more than enough capacity if you are running 100 watts or less, like most hams! The standard models are made with 16 gauge insulated wire and use Hy-Power quality parts including stainless steel hardware, SO-239 type center insulator and two end insulators. They are available in full sized (no coils), shortened or multiband configurations. They are compact and lightweight for portable field operation or permanent base installation. Each antenna is completely assembled and ready to install. Just add your coax cable and rope (please see page 56).

Model	Type	Feet	Order#	Price
FSDP40Q	40M Fullsized	70	*#1655*	$39.95
FSDP30Q	30M Fullsized	48	*#1652*	36.95
FSDP20Q	20M Fullsized	35	*#1640*	34.95
FSDP17Q	17M Fullsized	26	*#1630*	33.95
FSDP15Q	15M Fullsized	23	*#1613*	32.95
FSDP10Q	10M Fullsized	17	*#1601*	29.95
FSDP 6Q	6M Fullsized	10	*#1600*	28.95
LD4030Q	40M Shortened	30	*#1595*	43.95
LD3017Q	30M Shortened	17	*#1587*	42.95
LD2020Q	20M Shortened	20	*#1572*	38.95
LD2012Q	20M Very Short	12	*#4625*	38.95
LD1512Q	15M Very Short	12	*#4626*	38.95
2B2040LQ	20/40M Multi	44	*#1570*	62.95
2B1040Q	10/40M Multi	31	*#1568*	51.95
2B1520Q	15/20M Multi	29	*#1535*	47.95

HY POWER DIPOLES

This series of full-sized, full power dipoles made by Hy Power feature 12 gauge UV insulated wire and use stainless steel electrical hardware, SO-239 type center insulator and two end insulators. They are available in full sized (no coils), shortened or multiband configurations. Completely assembled - just add your coax cable and rope.

Model	Type	Feet	Order#	Price
FSDP160	160M Fullsized	268	*#1285*	$79.95
FSDP 80	80M Fullsized	138	*#1292*	54.95
FSDP 60	60M Fullsized	90	*#1293*	44.95
FSDP 40	40M Fullsized	70	*#1299*	39.95
FSDP 30	30M Fullsized	48	*#1372*	36.95
FSDP 20	20M Fullsized	35	*#1441*	34.95
FSDP 17	17M Fullsized	26	*#1439*	33.95
FSDP 15	15M Fullsized	23	*#1429*	32.95
FSDP 10	10M Fullsized	17	*#1383*	29.95
FSDP 6	6M Fullsized	10	*#1378*	29.95
LD4041	40M Loaded	41	*#1282*	52.95
2B2040L	20/40M Multi	44	*#1279*	68.95
2B1730L	17/30M Multi	31	*#1272*	54.95
TRI1020	10/15/20M "	34	*#1259*	69.95
TRIWARC	12/17/30M "	46	*#1251*	79.95

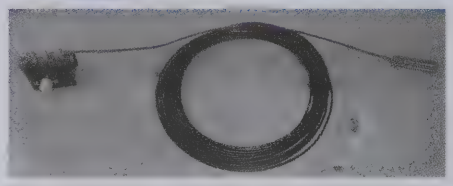
HY POWER OCF

The **Hy Power Off Center Fed** antennas are very efficient and effective multi-band antennas. They feature stainless steel hardware, #12 UV insulated wire and GU4-HF-5KW-A Guanella 4:1 current baluns rated at 5000 watts. Completely assembled - just add your coax cable and rope.

Model	Bands	Feet	Order#	Price
OCF80	80/40/20/17/12/10/6	135	*#1164*	$129.95
OCF40	40/20/10/6	66	*#0946*	114.95

PAR

END-FEDZ



The **LNR Par End-Fedz** are full length half wave dipoles with the coax connector at one end of the dipole, where it is most needed. These antennas can be mounted horizontally, vertically or as a sloper. End insulators are supplied. All hardware is stainless and the SO239 connector is silver-teflon. The radiator material is a tough, polyethylene jacketed, flexible #18 copper wire. Power rating is 100 watts, except 200W on #4965 & #2836 and 25W *#1952*. The all black construction makes them difficult to see. Great for portable, Field Day or stealth applications. [1]@2.1 VSWR.

Band	Length	1.5:1 BW	Order#	Price
EF-80	135 Feet	130 kHz	*#5699*	$124.95
EF-40	66.0 Feet	255 kHz[1]	*#4965*	$69.95
EF-30	46.0 Feet	200 kHz	*#2836*	$64.95
EF-20	33.0 Feet	300 kHz	*#4456*	$57.95
EF-17	28.0 Feet	350 kHz	*#4457*	$57.95
EF-15	22.0 Feet	400 kHz	*#4458*	$57.95
EF-12	17.5 Feet	500 kHz	*#4459*	$53.95
EF-10	16.5 Feet	600 kHz	*#4460*	$52.95
EF- 6	9.2 Feet	1200 kHz	*#4461*	$51.95
EF-10/20/40	39" [25 watts]		*#1952*	$74.95

OPEK

VUG144 VUG270

The **Opek VUG-144** is a through-the-glass antenna for 2 meters with a black, field-tunable 27.5 inch whip with 14 feet of RG58 coax terminating to a PL259. Gain 2.5 dB VSWR <1.5:1, 50 watts.
List $30.63 *Order #5070* **$22.95**

The **Opek VUG-270** is 2M/440 through-the-glass antenna with a black, field-tunable 26 inch stainless steel whip with 14 feet of RG58 coax terminating to a PL259. Gain is 2.6/4.0 dB. VSWR < 1.5:1 rated 50 watts. Covers 144-148 and 440-450 MHz.
List $33.36 *Order #5079* **$23.95**

OPEK

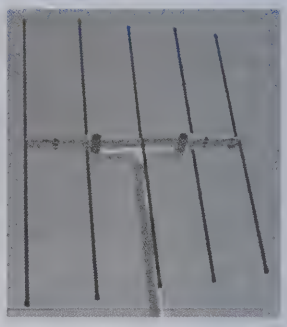
HVT-400B

The **Opek HVT-400B** is the economical solution to HF/VHF mobile operation. To change the band of operation you simply move the jumper. This antenna can be set to operate on any one of these bands: 80, 40, 20, 15, 10, 6 or 2 meters! Power capacity is 120 watts. 70 inches. The base of the antenna is a male PL259 and requires a PO mount. Does not include the mount or coax.
List $105.86 *Order #5066* **$69.95**

HVT-600

The **Opek HVT-600** (not shown) is similar to the HVT-400, but handles 200 watts.
List $112.80 *Order #5578* **$79.95**

2M/440L5

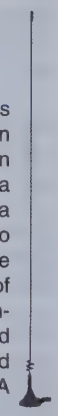


The **Elk Antenna 2M/440L5** is a 2 meter and 440 log periodic. Gain is 6.8 dBd (8.9 dBi) and 7 dBd (9 dBi). It features +20 dB front to back ratio. This antenna has a 24 inch corrosion resistant aluminum alloy boom and anodized aluminum elements. Hardware is stainless steel. It can handle 200 watts on 2 meters and 100 watts on 440 MHz. 1:1 SWR at 144-148 MHz and 430-450 MHz. Assembly and disassembly is fast thanks to color-coded elements that screw onto studs on the color-coded boom! Two bands are supported from one SO239 coax fitting. No duplexer is required. Just twist the mounting assembly to change from vertical to horizontal polarity. Only 1.3 lbs. Important Note: This antenna must be supported by a nonmetallic material. It is set up to receive a 1 inch PVC for the mast support (not supplied). Mast shown in photo is *not* supplied.
2M/440L5 *Order #4723* **$119.95**

The **ElkBag** is heavy-duty black nylon carry bag.
ElkBag *Order #4737* **$24.95**

MFJ

MFJ-1722 MFJ-1722S



The **MFJ-1722** *Ultralite™* antenna covers the 2 meter and 440 MHz with up to 50W on 2 meters and 25W on 440. SWR < 1.5. Gain is 2.5/3.0 dB providing significant gain over a rubber duck. This 2 ounce antenna has a twenty inch stainless steel whip attached to a tiny but powerful 1 1/8 inch diameter rare earth magnet. The base includes 9 feet of thin, flexible RG-174U coax with a BNC connector that easily snakes through a closed window or door. The whip easily bends and curves to fit any briefcase or glove box. A free BNC to PL259 adapter is included.
MFJ-1722 *Order #5433* **$14.95**

The **MFJ-1722S** is the same antenna, but there is a SMA plug at the end of the coax rather than a BNC. Includes a free SMA to PL-259 adapter.
MFJ-1722S *Order #5434* **$14.95**

UNADILLA

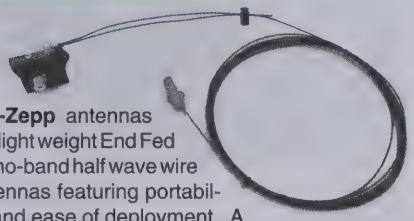
W2AU BALUNS

1:1 ratio balun for dipole antennas. Matches 50-75 Ohm coax lines to 50-75 Ohm load. Frequency: 1.8 to 40 MHz. Power Rating: 2000 watts PEP.
1:1 Balun *Order #2076* **$30.95**
4:1 Balun *Order #1888* **$30.95**

W2DU HF BALUN

Maxi-Balun 1:1 ratio for dipole antennas. Frequency: 1.8 to 30 MHz. Power Rating: 5000 watts.
List $31.50 *Order #2452* **$34.95**

QIK-ZEPP



Qik-Zepp antennas are light weight End Fed mono-band half wave wire antennas featuring portability and ease of deployment. A simple slide system allows fine tuning once the antenna is trimmed to resonance. They use a stranded copper coated steel radiator covered in a UV resistant black polyethylene jacket and most are rated at 100 watts. Fasteners are either stainless steel or nickel plated brass. There is a silver SO-239 coax connector on one end and a self locking high voltage insulator on the other. No counterpoise or ground is necessary. Orientations include vertical, horizontal, sloping or "L". The QZ-10/20/40 is a compact tri-band QRP antenna.

Model	Band	Power	Length	Order#	Price
QZ-60	60 Meters	50W	95 ft.	*#5786*	$99.95
QZ-40	40 Meters	200W	67 ft.	*#5399*	$63.95
QZ-30	30 Meters	200W	46 ft.	*#5398*	58.95
QZ-20	20 Meters	100W	34 ft.	*#5397*	51.95
QZ-17	17 Meters	100W	29 ft.	*#5396*	51.95
QZ-15	15 Meters	100W	23 ft.	*#5395*	51.95
QZ-12	12 Meters	100W	19 ft.	*#5393*	47.95
QZ-10	10 Meters	100W	17 ft.	*#5394*	46.95
QZ- 6	6 Meters	100W	10 ft.	*#5401*	44.95
QZ-10/20/40	10/20/40	25W	41 ft.	*#5402*	68.95

HY POWER BALUNS

Visit the Universal website to learn about our selection of quality Hy Power baluns. ([1]3500 on 6)

Model	Bands	Watts	Order#	Price
BL10-160-5KW	10-160	5000	*#5471*	$45.95
BLHF-250	6-160	250	*#1466*	32.95
GU4-HF-1KW	6-160	1000	*#5467*	49.95
GU4-HF-5KWA	6-160	5000	*#5465*	83.95
GU4-HF-5KWS	6-160	5000	*#5466*	82.95
GU4-HF-250	6-160	250	*#5468*	34.95
GU6-160-5KW	6-160	5000[1]	*#5469*	65.95

COMET SMA209J

The **Comet SMA209J** is a compact 3 inch HT antenna for 2 meters and 440 MHz. It is a 1/4 wave on 2 meters and a 5/8 wave on 440 MHz. Gain is 2.15/3.5 dBi and it can handle up to 5 watts. This antenna terminates to a *female* SMA which is what certain Wouxun HTs such as the KG-UVD1P/440 or KG-UV3D-2/420-520 require.

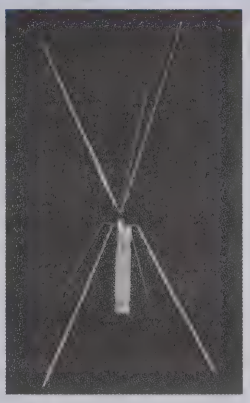
List $22.00 *Order #5881* **$17.95**

Arrow Antenna GP52

The **Arrow GP52** is a quarter wave, 6 meter vertical antenna (50-54 MHz) with a 4 MHz bandwidth with an SWR of <2 to 1. With stainless steel hardware, SO-239 jack and U bolt assembly.

GP52 *Order #0206* **$52.95**

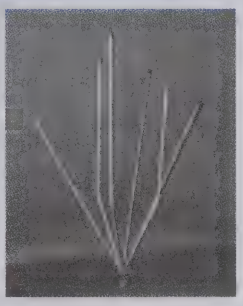
MP Antenna SUPER-M CLASSIC



The **MP Antenna Super-M Classic Base** was designed for amateur radio and scanner applications and seamlessly covers a receive frequency range of 25 MHz to 1.3 GHz. It offers unequaled transceive performance of the entire 2-Meter, 220 MHz and 440 MHz amateur bands (up to 200 watts). Multi-Polarized technology with MP Antenna design and production standards make the Super-M Classic™ a superior performer, especially on weak or obstructed signals. This antenna provides impressive gain and low VSWR throughout its entire operating range. Terminates to a female N jack.

08ANT0863 *Order #0307* **$110.95**

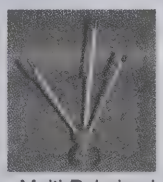
SUPER-M ULTRA MOBILE



The **MP Antenna Super-M Ultra Mobile** antenna provides very high performance in the 25 to 6000 MHz range. It may be used for transceive from120 to 6000 MHz. Power capacity is 200 watts below 512 MHz and 100 watts above 512 MHz. The unique design is dual polarized to provide a big signal at the horizon and out of the valley with reduced flutter and picket-fencing. This antenna may turn a few heads on the highway, but its strange appearance, with unique design, provides impressive gain and low VSWR throughout its entire range. Requires an NMO mount and coax cable (neither included).

08ANT0860 *Order #1304* **$109.95**

SUPER M400



The **MP Antenna Super M400™** mobile antenna was designed for two-way government and commercial radio communications from 400 MHz to 500 MHz (up to 200W). The Multi-Polarized technology improves reception of weak, obstructed signals. 5.25 x 6.5 x 5.25" 0.15 lbs. Requires NMO mount and cable (neither included).

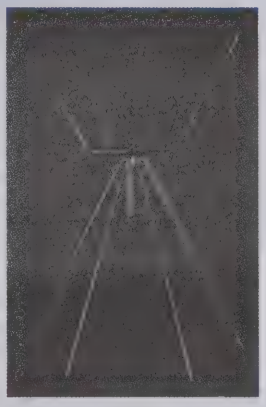
08ANT0864 *Order #1126* **$49.95**

CHAMELEON ANTENNA EMCOMM II

The **Chameleon EMCOMM II** antenna system covers 6 to 60 meters 500W SSB or 250W CW. This 60 foot antenna requires an external tuner. See our website for more Chameleon antennas.

EMCOMM II *Order #0991* **$109.95**

SUPER-M ULTRA



MP Antenna Super-M Ultra™ Base was designed for Ham, Scanner and 2-Way Govt./Commercial communications and seamlessly receives from 25 MHz to 6 GHz and transmit range of 88 MHz to 6 GHz (200W <512 MHz and 100W >512 MHz). Multi-polarized or M-POL™ Technology provides unequalled communication in obstructed, non-line-of-sight environments. This patented technology results in a stronger, more stable, three dimensional signal. 40 inches tall and 27 inches wide, 2.1 lbs. Mounts to standard 1.25 to 2.0 inch mast (not supplied) with supplied stainless steel clamps. N type jack.

08ANT0861 *Order #1628* **$189.95**

SUPER-M CLASSIC MOBILE

The **MP Antenna Super-M Classic Mobile** may have an unusual appearance, but it is a versatile VHF-UHF antenna providing high performance from 25 to 1300 MHz. It may be used for transceive in the entire 2-meter, 220, and 440 MHz amateur bands. Power capacity is 200 watts and tuning is not necessary. The unique design is dual polarized to provide a big signal at the horizon and out of the valley with reduced flutter and *picket-fencing*. The three elements are between 15 and 20 inches. The base requires an NMO mount. Mount and coax cable are not included.

08ANT0865 *Order #1171* **$84.95**

MFJ MFJ-1625 MFJ-1622

The **MFJ-1625** is a unique antenna system that mounts on window frames, balconies and railings. It is perfect for apartment dwellers. It covers 80 through 6 Meters with up to 200 watts. It includes a universal mount/clamp, built-in antenna tuner with RF isolator, long 12 foot telescoping whip (22.5 inches collapsed), high efficiency loading coil for 40/80 Meters, counterpoise wires and safety rope. Input is SO-239. (Does not include coax cable).

MFJ-1625 *Order #0483* **$189.95**

The **MFJ-1622** is the antenna *only*. No tuner.

MFJ-1622 *Order #3950* **$93.95**

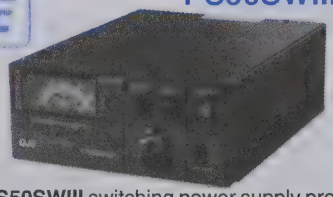
QJE

PS30SWV

The **QJE PS30SWV** switching power supply provides 13.8 VDC at 25 amps continuous, 30 amps surge. The output voltage is adjustable from 9 to 15 VDC. It features a front panel lighter plug for low current (10A) accessories. There are also red and black snap terminals on the front panel for very low power accessories (3A). Red and black terminals (30A) and a quiet fan are on the rear panel. The digital panel meter can simultaneously display voltage and current. There is a Noise Off-Set Control that can be adjusted to eliminate pulse noise from the power supply. It has short-circuit, over-current and over-temperature protection, plus a user replaceable fuse (8A). 7.5 x 2.75 x 7.2 inches 5.1 lbs.
List $169.95 *Order #4912* **$109.95**

QJE

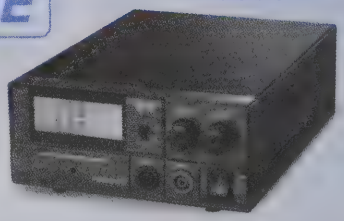
PS50SWIII



The **QJE PS50SWIII** switching power supply provides 48 amps continuous, 50 amps surge. A front panel switch selects fixed 13.8 VDC or adjustable 9 to 15 VDC. It features a front panel lighter plug for low current (10A) accessories. Red and black terminals (50A), and a quiet fan on are the rear panel. The analog panel meter can display voltage or current. There is a Noise Off-Set Control that can be adjusted to eliminate pulse noise from the power supply. It has short-circuit, over-current and over-temperature protection, plus a user replaceable fuse. Output voltage regulation is less than 2% variance. Input voltage is 110 VAC 60Hz. 7.75 x 3.4 x 11.1 inches 5.6 lbs.
List $160.00 *Order #1531* **$149.95**

QJE

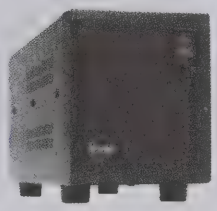
PS30SWIV



The **QJE PS30SWIV** switching power supply provides 13.8 VDC at 20 amps continuous, 30 amps surge. The output voltage may be selected fixed at 13.8 VDC or adjustable from 9 to 15 VDC. Red and black (30A) terminals are on the rear panel. Low amperage tip jacks are on the front panel. The LCD digital panel meter *simultaneously* displays voltage *and* current. There is a Noise Off-Set control that can be adjusted to eliminate pulse noise from the power supply. Ripple is less than 100mV p-p at load. Input is 110/220 VAC selectable. 6.1 x 2.8 x 8.1" 3.3 lbs.
List $129.95 *Order #5851* **$99.95**

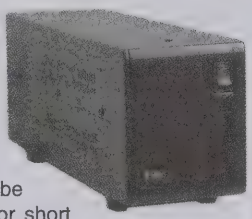
ICOM

PS-125



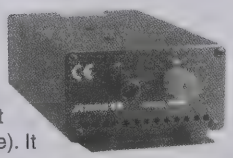
The **Icom PS-125** switching power supply provides 13.8 VDC ±5%, at 25 amps. 120 VAC input. The PS-125 may be configured as a *tall* or *short* power supply based on how the rubber feet are attached. The output cord features the 6 pin Molex plug prewired for many older Icom base radios. 4.4 x 3.7 x 11.3 inches 6 lbs. 10 oz.
List $446.00 *Order #2694* **$349.98**

PS-126



The **Icom PS-126** switching power supply provides 13.8 VDC ±5%, at 25 amps. 120 VAC input. The PS-126 may be configured as a tall or short power supply based on how the rubber feet are attached. The logo may be applied at either angle. In the tall configuration the power supply physically matches the height of the IC-7600. The rear panel has a 14 inch output cord with 4-pin plug prewired for the IC-7200/7410/7600/9100. 4.4 x 3.7 x 11.3" 6.5 lbs.
List $499.00 *Order #4014* **$429.95**

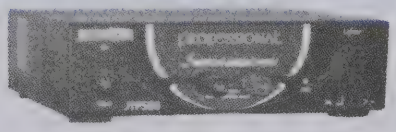
JTMINI15



The **Jetstream JTMINI15** compact switching power supply provides 13.8 VDC at 12 amps (15 amps surge). It has a five-way binding post on the front panel and has a Warning LED. The rear panel has the power switch and fan. The rubber feet can be removed and four screws are provided if permanent mounting is desired. Input is 110 VAC. Only 3.75 x 2.25 x 7.5 inches.
Order #3311 **$59.95**

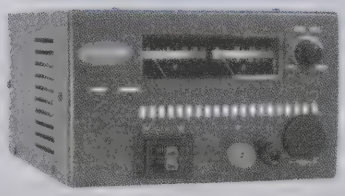
JETSTREAM

JTPS28



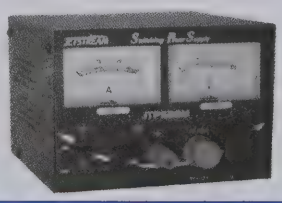
The **Jetstream JTPS28** power supply provides 13.8 VDC at 25 amps (28 amps surge). It features five-way binding posts on the front panel and a lighter plug for low current (7A) accessories. It has over-voltage protection, over-current protection and fan with Fan On LED. Input is 110/220 VAC switchable. 7 x 2.25 x 8 inches.
Order #5226 **$84.95**

JTPS35BCMA

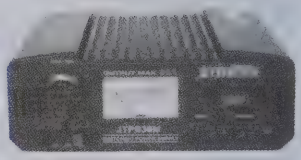


The **Jetstream JTPS35BCMA** adjustable power supply provides from 9 to 15 VDC at 27 amps (30 amps surge). There is a separate meter for voltage and one for amperage. It features five-way binding posts on the front panel and a lighter plug and spring loaded terminals for low current (7A) accessories and has PowerPole jacks. It has over-voltage and over-current protection plus a quiet auto-on internal fan with warning LED. The rear panel has binding posts for battery backup (battery not supplied) and another set of PowerPole jacks. Input is 110/220 VAC. 7 x 8.75 x 4.5 inches.
Order #5344 **$139.95**

JTPS28M

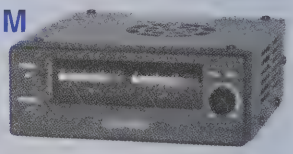


JTPS30M



The **Jetstream JTPS30M** adjustable power supply provides from 9 to 15 VDC at 25 amps (30 amps surge). The meter can display voltage or amperage. It features quick connectors on the front panel for low current accessories (3A), and a cigarette jack for under 10 A loads. The rear panel has high amperage posts (30A), a fan and a Voltage Fix/Adjust switch to engage or disengage the variable voltage feature. With the variable voltage disabled, the output becomes fixed at 13.8VDC. Has over-voltage protection, over-current protection and internal fan. Input is 110/220 VAC switchable. 7.5 x 2.75 x 7 inches.
List $119.00 *Order #5337* **$109.95**

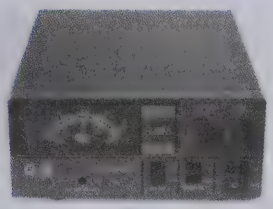
JTPS14BCM



The **Jetstream JTPS14BCM** adjustable switching power supply provides from 9 to 15 VDC at 12 amps (14 amps surge). There is a separate meter for voltage and one for amperage. It features binding posts on the rear panel for voltage out and binding posts for battery backup (battery not supplied). It has over-voltage protection, over-current protection and quiet auto-on internal fan with warning LED. Input is 115/230 VAC switchable.
List $79.00 *Order #2908* **$69.95**

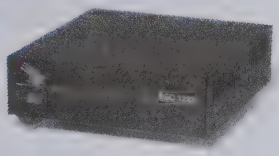
The **Jetstream JTPS28M** adjustable power supply provides from 9 to 15 VDC at 25 amps (28 amps surge). There is a separate meter for voltage and one for amperage. It features five-way binding posts on the front panel and a lighter plug for low current (7A) accessories. It has over-voltage protection, over-current protection and quiet internal fan with *Fan On* LED. Input is 110/220 VAC switchable. 5.75 x 4.5 x 7 inches.
Order #3440 **$99.95**

QJE PS30SWIII



The **QJE PS30SWIII** switching power supply provides 13.8 VDC at 20 amps continuous, 30 amps surge. The output voltage is adjustable from 9 to 15 VDC. Red and black terminals are on the rear panel (30A). The backlit panel meter may be selected to display voltage or current. There is a Noise Off-Set control that can be adjusted to eliminate pulse noise from the power supply. Ripple is less than 80mV p-p at load. Input is 110 VAC. 6.1 x 2.8 x 8.1 inches 3.3 pounds.
List $119.95 *Order #5587* **$69.98**

samlexamerica SEC-1223



The **Samlex SEC-1223** switching power supply provides 13.8 VDC at 23 amps continuous or 24 amps surge. Housed in a heavy metal case with non-skid rubber feet and has an illuminated on-off switch, removable AC cord and cooling fan. Output is to two screw type binding posts on the back panel. It features current limiting, short circuit and over voltage protection. Output ripple and noise is <15 Mv RMS. 7.2 x 8.7 x 2.2 inches 3.3 lbs. UL listed.
List $152.60 *Order #2423* **$104.95**

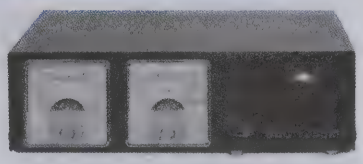
The **Samlex SEC-1223BM** is the same but with the BBM-1225 battery backup module installed.
List $181.00 *Order #3382* **$129.95**

The **SEC-1212** is similar to the SEC-1223, but 10 amps continuous and 12 amps peak. UL listed.
List $123.30 *Order #3747* **$89.95**

ASTRON VS-50M

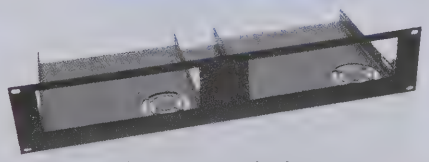
Astron power supplies feature solid-state electronic regulation, fold back current limiting for protection from excessive current and shorted output. Crowbar over voltage protection is also provided on all models except the RS-4A. These high-quality power supplies are manufactured in the U.S. and carry a one year limited warranty. Models ending in "M" feature a meter or meters. Models starting with "VS" are variable 2 to 15 volts. [1]Amp ratings for variable supplies are rated at 13.8 VDC. Models starting with "RM" or "SRM" are for 19" rack mounting. "SRM" are switching rack mount power supplies. Models ending in "-2" are dual power supplies.

samlexamerica SEC-1235M



The **Samlex SEC-1235M** is housed in a heavy metal case with nonskid rubber feet and has an illuminated on-off switch, removable AC cord and cooling fan. Output is 13.8 VDC 35 amps surge, 30 amps continuous, to two screw type binding posts on the back panel. This power supply features current limiting, short circuit protection and over-voltage protection. The SEC-1235M model features a volt meter and amp meter, plus has a temperature controlled fan on the bottom. Two solder terminals are thoughtfully provided. UL listed. 110 VAC input. 8.4 x 2.5 x 7.3" 3.4 lbs.
List $174.20 *Order #1235* **$139.95**

SEC-R1 SEC-R2

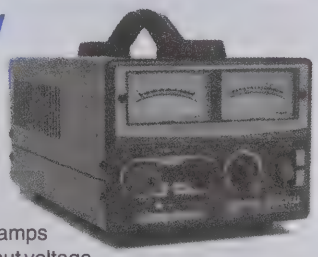


The **Samlex SEC-R1** and **SEC-R2** rack mount plates allow for mounting the Samlex SEC-series power supplies into a 19 inch rack. Available in a single or dual (shown) power supply configuration.
SEC-R1 Single *Order #1339* **$42.95**
SEC-R2 Dual *Order #6048* **$50.95**

SS-505

The **Daiwa SS-505** regulated, variable switching power supply provides 5 to 15 VDC at 50 amps continuous (55 amp surge). Input voltage is 90-123 VAC 50/60 Hz. Less than 1.5% voltage fluctuation and less than 5 mV ripple voltage. Output to binding posts on the rear panel. Low amperage spring loaded terminals and cigarette lighter jack are on the front. With carry handle and automatic fan. Only 9 x 5 x 12.5 inches 8.4 lbs.
List $489.00 *Order #0944* **$389.95**

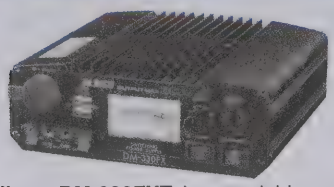
SS-330W



The **Daiwa SS-330W** regulated, variable switching power supply provides 5 to 15 VDC at 30 amps continuous. Input voltage is 110 VAC 50/60 Hz. Less than 1.5% voltage fluctuation and less than 10 mV ripple voltage. It features output to binding posts on the front panel and dual meters. Handle on the top and a fan on back. 5.2 x 4 x 10.5 inches
List $184.95 *Order #3344* **$169.95**

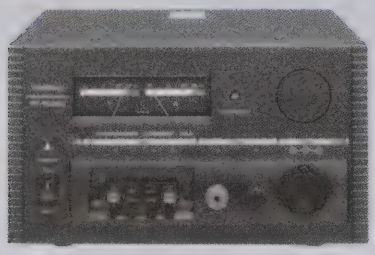
Order #	Model	Continuous Duty Amps	ICS Amps	Size(in) HxWxD	Shipping Weight (lbs.)	List Price	Your Price
2461	**RM-35M**	25	35	5.25 x 19 x 13	27	$356.95	**$269.95**
0779	**RM-50M**	37	50	5.25 x 19 x 13	50	412.95	**339.95**
1208	**RM-60M**	50	55	7 x 19 x 13	60	541.95	**439.95**
2505	**RS- 4A**	3	4	3¾ x 6½ x 9	7	63.95	**51.95**
2506	**RS- 7A**	5	7	3¾ x 6½ x 9	9	84.95	**69.95**
2507	**RS-12A**	9	12	4½ x 8 x 9	13	111.95	**92.95**
2508	**RS-20A**	16	20	5 x 9 x 10½	18	138.95	**119.95**
2510	**RS-20M**	16	20	5 x 9 x 10½	18	170.95	**139.95**
2509	**RS-35A**	25	35	5 x 11 x 11	27	225.95	**179.95**
2511	**RS-35M**	25	35	5 x 11 x 11	27	252.95	**199.95**
1815	**RS-50A**	37	50	6 x 13¾ x 11	46	335.95	**269.95**
1045	**RS-50M**	37	50	6 x 13¾ x 11	46	369.95	**309.95**
2528	**RS-70M**	57	70	6 x 13¾ x 12¼	53	430.95	**349.95**
2369	**SL-11A**	9	11	3 x 7¾ x 9¾	16	109.95	**89.95**
1043	**SS-25**	20	25	3 x 7 x 9½	5	139.95	**119.95**
0541	**SS-25M**	20	25	3 x 7 x 9½	5	167.95	**149.95**
1419	**SS-30**	25	30	3¾ x 7 x 9¾	6	151.95	**129.95**
0502	**SS-30M**	25	30	3¾ x 7 x 9¾	6	179.95	**159.95**
0039	**VS-20ML**	16[1]	20[1]	5 x 9 x 10½	20	193.95	**154.95**
0756	**VS-35M**	25[1]	35[1]	5 x 11 x 11	29	269.95	**209.95**
2994	**VS-50M**	37[1]	50[1]	6 x 13¾ x 11	46	383.95	**309.95**
2826	**VS-70M**	57[1]	70[1]	6 x 13¾ x 13	48	445.95	**349.95**
4155	**SRM-25**	20	25	3.5 x 19 x 9.4	7	162.60	**139.95**
4156	**SRM-25M**	20	25	3.5 x 19 x 9.4	7	188.95	**164.95**
4153	**SRM-30**	25	30	3.5 x 19 x 9.4	7	170.35	**149.95**
4154	**SRM-30M**	25	30	3.5 x 19 x 9.4	7	201.35	**174.95**
4159	**SRM-25-2**	20/20	25/25	3.5 x 19 x 9.4	11	306.75	**259.95**
4157	**SRM-25M-2**	20/20	25/25	3.5 x 19 x 9.4	11	345.34	**309.95**
4160	**SRM-30-2**	25/25	30/30	3.5 x 19 x 9.4	11	326.90	**289.95**
4158	**SRM-30M-2**	25/25	30/30	3.5 x 19 x 9.4	11	385.80	**339.95**

ALINCO DM-330FXT



The **Alinco DM-330FXT** is a variable voltage, switching power supply that delivers 5 to 15 VDC at 28 amps continuous or 30 amps surge. With short circuit protection, a current-limiting system and extreme-temperature protection. The preset voltage function makes the DM-330FXT even easier to use. Just store the most frequently used voltage in the memory, and it is constantly ready to go. A cigar-plug socket (maximum 10 amps), a set of Max 30 amps terminals, and two sets of 5A snap-in terminals, two USB ports are provided. A backlit Amp/V meter. Input voltage is 120 VAC. Ripple is less than 50mVp-p at rated load.
List $205.95 *Order #2330* **$184.95**

YAESU FP-1030A



The **Yaesu FP-1030A** power supply provides 13.8 VDC at 25 amps continuous or 30 amps surge. Input is 120 VAC 60 Hz. Dual meters showing voltage and amperage are featured along with a red LED for overload indication. The front panel includes: 25 amp high power lugs, 10 amp cigarette lighter jack and 6 amps spring loaded terminals. 9.8 x 5.9 x 9.5". Grey. 20.9 lbs (9.5 kg).
List $345.22 *Order #3640* **$269.95**

YAESU FP-1023

The **Yaesu FP-1023** switching power supply provides 13.8 VDC at 23 amps. Input is 120 VAC 60 Hz. It has a temperature controlled cooling fan, removable AC cord and five-way binding posts on the rear panel. 7 x 2.2 x 8.25 inches 3.5 lbs.
List $216.88 *Order #3631* **$169.95**

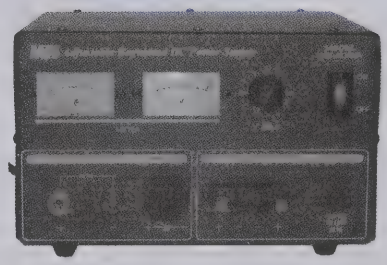
PYRAMID PS-4KX

The **PS-4KX** 3 amp (4A surge) regulated 12 VDC power supply will run the low amperage devices from 120 VAC. With fuse, LED, surge and short protection. 5 x 3 x 7.5".
List $45.00 *Order #6083* **$39.95**

MFJ-4245MV

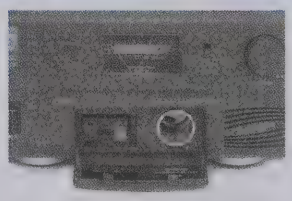
The **MFJ-4245MV** regulated switching power supply provides 9 to 15 VDC at 45 amps surge or 40 amps continuous. Input is 110 VAC 47-62 Hz or 220 VAC 47-63 Hz switchable. The front panel has: five way binding posts, cigarette lighter socket and two quick disconnect connectors. Lit meters show voltage and amps. Includes over voltage and over current protection. Meets FCC Class B. 7.5 x 4.75 x 9 inches 6 lbs. One year limited mfg. warranty.
List $149.95 *Order #2105* **$139.95**

MFJ-4035MV



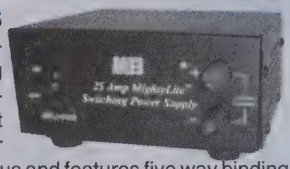
The **MFJ-4035MV** regulated power supply provides 1 to 14 VDC at 35 amps surge or 30 amps continuous. Input is 110 VAC. The MFJ-4035MV features an easy access front panel with three-way output: five way binding posts, cigarette lighter socket and two quick disconnect connectors. The dual meters (non-illuminated) show voltage and amps. Built-in circuit protection. A fan keeps the supply running cool. AC line fused from the front panel. 9.5 x 6.1 x 9.7 in. 19.2 lbs.
List $149.95 *Order #3286* **$144.95**

DIAMOND GZV4000



The **Diamond GZV4000** regulated, variable switching power supply provides 5 to 15 VDC at 40 amps continuous. Input voltage is 100-140 VAC. < 8 mV ripple voltage. The backlit meter can be switched to show amps or volts. A front panel access door hinges down to allow connection to the low amperage spring loaded clips or cigarette lighter jack. Has LEDs for power and overload conditions plus variable speed fan. With built-in 8 ohm speaker making it great for your service bench. 8.25 x 4.5 x 13 inches 8 lbs.
Order #3195 **$179.95**

MFJ-4125



The **MFJ-4125** *MightyLite* regulated switching power supply provides 13.8 VDC at 25 amps surge or 22 amps continuous and features five way binding posts on the front. With over voltage and over current protection. Green power LED. A whisper fan keeps things cool. Switchable input: 110/220 VAC 47-62 Hz. 5.5 x 2.5 x 5.75" 3.75 lbs.
List $84.95 *Order #1417* **$79.95**

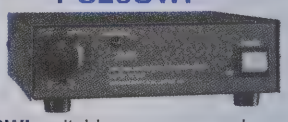
MFJ-4125P

This **P** model is similar, but adds 2-pair of Anderson PowerPole connections to the front panel.
List $94.95 *Order #4024* **$88.95**

MFJ-4230MV

The **MFJ-4230MV** switching power supply provides 4 to 16 VDC at 30 amps surge or 25 amps continuous. Input is 110/220 VAC 47-62 Hz switchable. The meter can display Amps or Volts. DC output is provided via five-way binding posts on the back panel. Quiet fan. 5 x 2.5 x 6" 3 lbs.
List $89.95 *Order #6401* **$84.95**

QJE PS23SWI

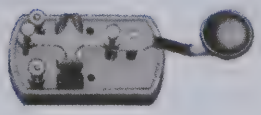


The **QJE PS23SWI** switching power supply provides fixed 13.8 VDC at 23 amps. The output voltage may be fine tuned by the user from 13.3 to 14.5 VDC. It features a front panel cigar lighter plug for low current (10A) accessories. 23 amp binding posts are on the rear panel. This efficient, small footprint power supply has short-circuit protection, over-current protection and a quiet fan on the back panel. Ripple and noise <100mVp-p. 110 VAC 60 Hz. 7.2 x 2.5 x 7.5". 3.5 lbs.
List $99.95 *Order #6041* **$79.95**

DIAMOND GZV6000

The **Diamond GZV6000** regulated, variable switching power supply provides 1 to 15 VDC at 60 amps continuous. Input voltage is 100-140 VAC. Less than 8 mV ripple voltage. The back-lit meter can be switched to show amps or volts. A front panel access door hinges down to allow connection to the 6 amp low amperage spring loaded clips or cigarette lighter jack. The rear panel has high amperage terminals, 3.5 mm speaker input jack and fuse. This supply features LEDs for power and overload conditions. The variable speed fan ensures quiet operation. It even has a built-in 8 ohm, 5 watt speaker making it a great space saver on your service bench. 8.3 x 4.4 x 15" 13 lbs.
List $399.95 *Order #3536* **$339.95**

K-1R



The **Ameco K-1R** is an economical practice code key with a black plastic base.
K-1R *Order #3021* **$11.95**

UKB black aluminum base for K-1R with screws.
UKB *Order #5301* **$14.98**

OCM-2W

The **Ameco OCM-2W** is a combination code practice oscillator and CW monitor. It has a built-in speaker plus terminal connectors for headphones. A 9 volt battery and code key are required.
OCM-2W *Order #0545* **$34.95**

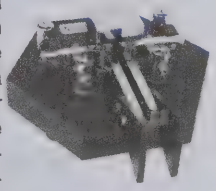
BY-2

Bencher paddles include gold-plated solid silver contact points.

Order#	Model	Item Description	List Price	Your Price
0458	**BY-1**	Iambic Black	$135.00	**$119.95**
0459	**BY-2**	Iambic Chrome Plated	175.00	**149.95**
3218	**RJ-1**	Hand Key Black	150.00	**129.95**
3219	**RJ-2**	Hand Key Chrome Plate	175.00	**149.95**
0006	**ST-1**	Straight Black	145.00	**119.95**
0559	**ST-2**	Straight Chrome Plated	175.00	**149.95**

✔ Keys and paddles require cable not included.

HEX KEY



The **Bencher Hex Key** has a unique design that is attractive to the eye and a perfect match for the fingers of the proficient CW operator. Fully iambic, this innovative design utilizes magnets for tensioning, and unlike some rather expensive European designs, allows separate individual tensioning adjustment for dot and dash contacts. Weighs over 3 pounds!
List $325.00 *Order #4477* **$279.95**

MFJ-422D

This deluxe keyer fits directly over the supplied Bencher BY-1 paddle for a compact configuration. It has adjustable weight, tone, speed and volume. Requires 9V battery or MFJ-1312D *#2433* $15.95.
List $199.95 *Order #0804* **$189.95**

MFJ-401D & 407D

The **MFJ-401D** *Econo Keyer II* is for iambic, automatic, semi-automatic or manual keying with your favorite paddles. Requires a 9V battery.
List $69.95 *Order #0325* **$62.95**

The **MFJ-407D** has the same features as above with front-panel mounted controls for speed, weight, tone and volume. Requires a 9V battery.
List $79.95 *Order #1324* **$74.95**

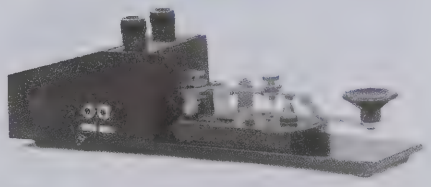
MFJ-550

Economy straight key includes adjustments for tension and for gap size. Black plastic base.
Order #4656 **$14.95**

MFJ-553

This is the MFJ-550 mounted on a beautifully stained wood base with cable to 3.5mm mini plug.
Order #1294 **$27.95**

MFJ-557

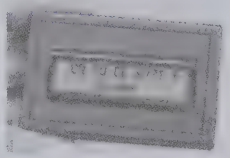


Deluxe code practice oscillator with straight key mounted on a heavy steel base. Has volume and tone control. Needs a 9V battery or MFJ-1312D.
List $39.95 *Order #0555* **$39.95**

MFJ-418

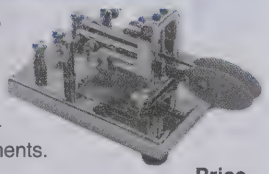
Learn Morse code anywhere, any time with the MFJ Pocket Morse Code Tutor. The LCD lets you see the code as it is generated. The **MFJ-418** is adjustable from 3 to 55 WPM with normal or Farnsworth spacing. Only 3.75 x 2.25 x 1". Requires a 9 volt battery.
List $89.95 *Order #3537* **$79.95**

MFJ-461



The **MFJ-461** Morse Code Reader lets you watch Morse code signals turn into text messages. The words simply scroll across the LCD display. No cables to hook-up, no computer, no interface, no other equipment needed! Two-line, 32 character LCD display. Requires a 9 volt battery, not supplied.
List $89.95 *Order #2070* **$84.95**

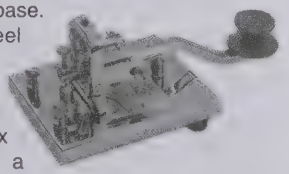
VIBROPLEX



"Vibroplex, since 1890", is the oldest name in amateur radio. All the Vibroplex Iambics feature jeweled movements.

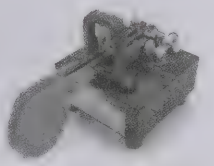
Order#	Model	Price
4272	**Iambic Standard**	$149.95
4277	**Iambic Deluxe** (shown)	189.95
3360	**Iambic Presentation**	269.95
3325	**Iambic Gold**	299.95

The **Vibroplex Straight key** is distinctly designed on a heavy solid base. The stainless steel spring allows complete control of the tension. The famous Vibroplex logo plate with a unique serial number pinned to the top of the base with stainless steel pins.



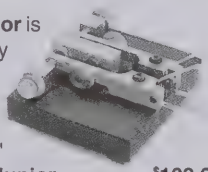
4417	**Straight Key Standard**	$149.95
4366	**Straight Key Deluxe** (shown)	199.95
1399	**Straight Key Gold**	299.95

The massive **Vibroplex Vibrocube Upgraded** iambic with jewel movement registers just under 6 pounds on the scale.



1995 **Vibrocube Upgraded** **$208.95**

The **Code Warrior Junior** is an elegant iambic key that utilizes magnetic action (no springs!). It is beautifully made and a very compact 2.5 x 3"

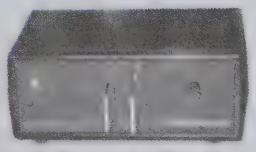


0561	**Code Warrior Junior**	$102.95
3265	**Chrome Code Warrior Junior**	139.95

✔ Visit our website for more Vibroplex products.
✔ Keys and paddles require cable not included.

West Mountain Radio

TOUCHkey



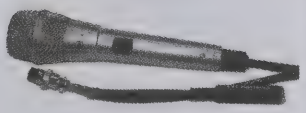
The **West Mountain Radio TOUCHkeyer** has no moving parts ... just touch the paddles to send perfect CW. The speed is adjustable from 5 to 50 wpm. There's a built in sidetone for listening or practice, an output for your own speaker, and a direct paddle output too. The gold plated paddles will not tarnish. It weighs 2 pounds, heavy enough to keep the keyer from traveling during use. It can be programmed for 32 functions and has two 80 character memories for CW messages. Includes 6 foot power cable with Powerpole® connectors, 6 foot mini-mini patch cable and 1/4 to 1/8" adapter. Operates from 6-14 VDC [+] or via internal 9 volt battery (not supplied).
List $118.95 *Order #5265* **$109.95**

HM HANDIMIC

The **Heil HM Handi Mic** is a new hand mic series designed with a very special open sorbothane shock mount that puts the various Heil microphone elements in the open, not encased in a shell. This results in the cleanest, clearest and most articulate hand microphone ever! The low handling noise and exceptional cardioid pattern makes the Handi Mic ideal for mobile or portable use. These Handi Mics terminate in the traditional Heil 4 pin XLR broadcast connector allowing the Heil CH1 connecting cables to be used. Heil has developed a new series of shielded coiled cables called the CH1 series. The Heil CH1 is a shielded coil cord with 14" of straight section and 15" of coil making it very easy to use unlike most of the coil cords. Each Handi Mic is shipped with the unique Heil dash or wall mount, a 5/8" -27 mic clip and a foam windscreen.

HM-4 [HC4]	*Order #0000*	Disc.
HM-5 [HC5]	*Order #0000*	Disc.
HM-iC [iC]	*Order #3293*	**$88.98**
HMM-PRO	*Order #3291*	**$88.98**

iCM



The **Heil iCM** mic is expressly for Icom ***pre*** PRO models and features the new Heil 'iC' element (35 to 10,000 Hz @-3dB) perfect for the early ICOM audio preamplifiers. The beautiful platinum finish body is perfect for hand held use or mounting on a desk stand or microphone boom. It is supplied with a universal mic clip that will interface with a variety of stands and booms. The iCM comes complete with an attached 5 foot Heilwire cable and terminates in the familiar 8 pin Foster connector wired to mate with all early 8 pin Icom front ends. A ¼ inch female pig tail exits this 8 pin connector that allows the interface of a footswitch or hand switch (both optional) to control the PTT line. A soft touch PTT switch is mounted on the body of the iCM.
List $120.00 *Order #3224* **$99.95**

NISSEI NS-508

The **Nissei NS-508** desk mic provides clear FM, AM and SSB communications. Features include: on-air LED, 11" gooseneck, adjustable level, FM/SSB switch and PTT lock. Requires 2 AA batteries and appropriate radio cable (neither included).
List $99.95 *Order #2895* **$69.98**

#2171	**NS-24I**	Cable Icom 8 Pin	**$17.95**
#0864	**NS-24K**	Cable Kenwood 8 Pin	**17.95**
#5967	**NS-24Y**	Cable Yaesu 8 Pin	**17.95**
#3403	**NS-73I**	Cable Icom Modular	**17.95**
#5968	**NS-73K**	Cable Kenwood Modular	**17.95**
#0463	**NS-73Y**	Cable Yaesu Modular 8pin	**17.95**
#5991	**NS-90Y**	Cable Yaesu Modular 6pin	**17.95**

FIN

The **Heil FIN** utilizes the professional PR20 cardioid element housed in a gorgeous high-gloss chrome-finish enclosure. If phantom power is provided to the Fin, the blue wind screen becomes illuminated by four imbedded LEDs, adding an art deco appearance. The frequency response is 60 Hz to 18 kHz with the traditional Heil sound mid range bouquet at 4 kHz which presents incredible brilliance and presence. Includes aluminum carry case with a cloth mic pouch. This mic does not include the required XLR cable or stand.
List $220.00 *Order #5022* **Please Call**

GM Elite

The new **Heil GM Elite** is a dual element mic with broadcast wide response and the new narrow Heil HC-5.1 element. This mic, and the GM series, require CC-1 cables, sold separately.
List $163.00 *Order #2583* **$139.95**

PR781

The **Heil PR781** provides electrical and acoustical performance identical to that of the former PR780, but in a more compact enclosure that is eye-catching and downright beautiful. PR781 comes only with the SM3 mount, as shown. It does not include a base or required CC1 XLR cable. G version has gold colored windscreen.

PR781	*Order #2045*	**$149.95**
PR781G	*Order #6202*	**$169.95**

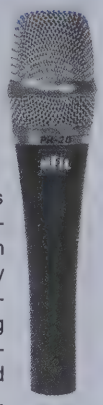
CC1 MIC CABLES

#0124	**CC1-C**	Collins 3/16" Plug	**$42.95**
#1772	**CC1-D**	Drake 4 Pin Plug	**$35.95**
#0108	**CC1-i**	Icom 8 Pin Plug	**$32.95**
#0351	**CC1-iM**	Icom Modular	**$32.95**
#3114	**CC1-K**	Kenwood 8 Pin	**$32.95**
#0239	**CC1-K-4**	Kenwood 4 pin Plug	**$34.95**
#1051	**CC1-KM**	Kenwood Modular	**$32.95**
#4528	**CC1-T**	Ten-Tec 4 Pin Plug	**$34.95**
#1517	**CC1-Y**	Yaesu 8 Pin Plug	**$32.95**
#0820	**CC1-Y-4**	Yaesu 4 Pin Plug	**$34.95**
#0336	**CC1-YM**	Yaesu Modular	**$32.95**
#1622	**CC1-XLRI**	Icom 8 Pin Plug	**$33.95**
#1508	**CC1-XLRK**	Kenwood 8 Pin Plug	**$33.95**
#1623	**CC1-XLRY**	Yaesu 8 Pin Plug	**$33.95**
#5648	**CC1-XLRYB**	Yaesu 8 Pin Plug	**$34.95**
#1480	**CC1-XLR3**	XLR 3 Pin Plug	**$33.95**
#5489	**CC1-XLR4**	XLR 4 Pin Plug	**$33.95**

CH1 MIC CABLES

#3408	**CH1-i**	Icom 8 Pin Plug	**$24.95**
#3401	**CH1-iM**	Icom Modular	**$24.95**
#3361	**CH1-K**	Kenwood 8 Pin Plug	**$24.95**
#3386	**CH1-KM**	Kenwood Modular	**$24.95**
#4766	**CH1-Y8**	Yaesu 8 Pin Plug	**$24.95**
#3346	**CH1-YM**	Yaesu Modular	**$24.95**

PR20 UT

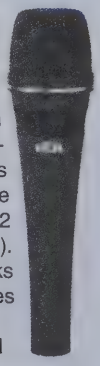


The **Heil PR20 UT** Proline broadcast mic is a professional quality dynamic cardioid microphone designed for commercial broadcast, recording and live sound reinforcement applications which require a smooth flat 40 - 18,000 Hz frequency response. This Heil 'PROLINE' element is usable in extreme high sound pressure levels and is immune to overload conditions as usually found with condensers. The cardioid pattern offers the greatest rejection at 180 degrees off axis which is directly behind the microphone and creates virtually no off-axis coloration while providing the greatest possible rejection of unwanted audio. This mic was designed principally for studio and broadcast use. It may also be used for traditional amateur radio applications with the addition of the appropriate XLR cable and HS 2 handswitch or FS 2 footswitch.
List $101.00 *Order #5290* **Please Call**

PR30

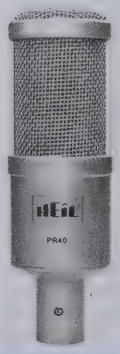
The **Heil PR30** Proline broadcast mic is a professional quality dynamic cardioid microphone designed for commercial broadcast, recording and live sound reinforcement applications and it has a sound comparable to the finest condenser microphone because of its wide frequency response, excellent transient response and low IMD. Shown with optional SM2. List $252.00 *Order #2920* **Please Call**

PR35



The new *upgraded* **Heil PR35** features a large-diameter, high-clarity element. Its three-position switch allows the operator to set the low-end roll-off point at 40 Hz, 60 Hz, or 120 Hz for best results on the air. The PR35 has a soft-touch outer coating that makes this mic an outstanding addition for high-end transceivers like the Icom 7800 or Pro series and the Yaesu FTdx9000/2000/950. The mic clip screws onto the CB-1PTT, SB-2 and PL-2T mounts (which are not included). Uses 3-pin XLR connector, and works with CC1-XLR series of adapter cables (sold separately).
List $276.00 *Order #5868* **Please Call**

PR40



The **Heil PR40** Proline Broadcast mic features the new technology of the Heil DM-6 dynamic element with response down to 28 Hz and stays perfectly flat up through 18kHz. with a beautiful mid range rise giving this microphone gorgeous vocal articulation. Shipped with the SM-3 5/8"-27 mount assembly.
Order #3886 **Please Call**

PROSET ELITE

The Heil **Pro Set Elite** offers efficient speakers mounted in acoustically-tuned enclosures, to provide a high degree of passive outside noise rejection. They include Heil's exclusive Phase Reversal system, which allows the operator to put the incoming signals in and out of phase between the left and right ears, creating a spatial separation of signals in dynamic pile-up situations on today's crowded bands.

PSE-6 Pro Set Elite 6 features the HC-6 element to enhance articulation on SSB circuits. Needs AC1.
List $183.00 *Order #5477* **$159.95**

PSE-ic Pro Set Elite iC is exclusively for Icom transceivers and has an "iC" electret condenser element and included AD1-ic cable adapter [8 pin].
List $194.00 *Order #0612* **$169.95**

PRO10 PKG

The stunning **Heil PRO10 PKG** was just announced as we went to press with this catalog. It features a dynamic studio quality microphone and LB-1 illuminated base. This mic requires a 3pin XLR cable (not included). We will post further information to our website as soon as it becomes available.
List $276.00 *Order #6406* **Please Call**

TRAVELER HTSS & HTDS

The **Heil Traveler HTSS** *single* and **HTDS** *dual* headsets have both been discontinued by Heil. We still have some radio cables available. Please call or visit our website.

ICOM SM-50

The **Icom SM-50** is a unidirectional, dynamic microphone designed for base station operation with select Icom transceivers. It features up-down tuning, a lock feature and a Low Cut switch to remove the low frequency components on voice signals. 55 ohm.
List $400.00 *Order #3839* **$299.95**

PMS6 PMD6

The **Heil PMS6** *single* sided boomset is similar to the Traveler HTSS, but utilizing the new Heil HC-6 mic element. The **Heil PMD6** is a *dual* sided version (not for mobile use). Both require the appropriate AD1 cable for your radio (sold separately).

PMS6 [Single] *Order #3124* **$72.95**
PMD6 [Dual] *Order #3501* **$84.95**

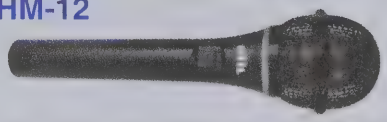
AD1 BOOMSET CABLES

#4231	**AD1-C**	Collins 90° 3/16" Plug	**$26.95**
#2204	**AD1-D**	Drake 4 Pin Plug	**$19.95**
#3879	**AD1-i**	Icom 8 Pin Plug	**$18.95**
#3336	**AD1-iCM**	Icom Modular	**$18.95**
#1393	**AD1-K**	Kenw/Alinco 8 Pin Plug	**$18.95**
#2718	**AD1-K-4**	Kenwood 4 Pin Plug	**$19.95**
#2056	**AD1-KM**	Kenw/Alinco Modular	**$18.95**
#0933	**AD1-T**	Ten-Tec 4 Pin Plug	**$19.95**
#0712	**AD1-Y**	Yaesu 8 Pin Plug	**$18.95**
#1717	**AD1-Y-4**	Yaesu 4 Pin Plug	**$19.95**
#2055	**AD1-YM**	Yaesu Modular	**$18.95**

PL-2T

The **Heil Proline PL-2T** is the finest professional microphone boom available. It is silent as it moves, is perfectly balanced and stays exactly where it is placed. It handles microphones up to 1.5 pounds and has the standard 'C' clamp mount that will accept a 1.5 inch thick table. You can remove the top and back plates to easily thread the mic cable inside the boom without removing the plug. It accepts the standard 5/8"-27 threaded mic clips or shock mounts. Mic and SM-1 shown not included.
List $120.00 *Order #2099* **$119.95**

HM-12



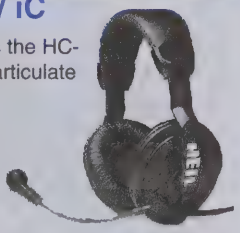
The **Heil HM-12** mic features the new Genesis dynamic element with wide response and mid range articulation for SSB/AM/FM communications. Requires CC-1 cable, sold separately.
List $71.00 *Order #2168* **$59.95**

ICOM SM-30

The **Icom SM-30** is a compact, lightweight unidirectional electret condenser desk microphone. It features a selectable low cut function, lock PTT switch and gooseneck mount. It has an 8 pin connector. Output impedance is 600 ohm. The required 8VDC is derived from the Icom radio.
List $195.00 *Order #5644* **$139.95**

The **Icom OPC-589** 8 pin to modular mic adapter for use with IC-706/7000 etc.
List $45.00 *Order #1120* **$34.95**

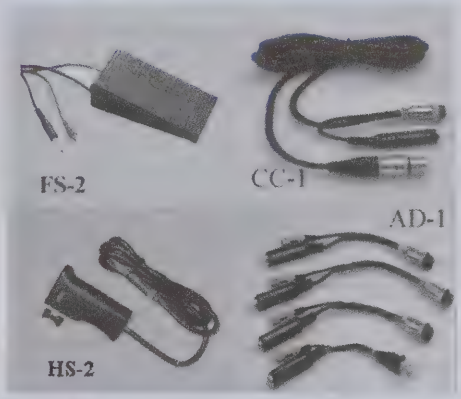
PROSET 6 / iC

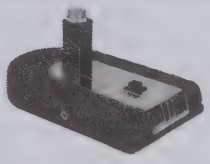


The Heil **Proset-6** uses the HC-6 element to provide articulate speech audio. The comfortable headband is fully adjustable and the mic boom is flexible. Requires AD1 type adapter sold separately.
List $155.00 *Order #5607* **$139.95**

Proset-iC is the same but with the famous Heil iC electret element and is *only* for Icom radios. The Pro Set ic *includes* the special AD-1 ic adapter.
List $164.00 *Order #0315* **$149.95**

MOUNTS & ACCESSORIES



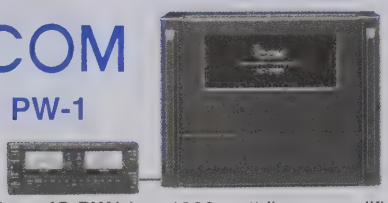


The **CB1-PTT** art deco base features a soft PTT switch that terminates on the left side to a 1/8" mini-jack *Order #1376*

#2840	**ADM817**	FT817 Adapter	**$27.95**
#3889	**BAG1**	Boomset travel bag	**$24.95**
#1376	**CB1-PTT**	Classic Mic Stand PTT	**$76.95**
#4263	**DT-1**	Flush desk flange mount	**$34.95**
#2025	**FL-2**	Desk flange mount	**$27.95**
#0481	**FS-2**	Dual Foot Switch	**$39.95**
#2621	**FS-3**	Single Foot Switch	**$23.95**
#5636	**HB-1**	Economy Mic Boom	**$59.95**
#2645	**HEILWIRE**	Mic wire 20 feet	**$21.95**
#4065	**HMC**	Two 8 pin Mic Plugs	**$8.95**
#3887	**HS-2**	Hand Switch	**$29.95**
#4242	**RS-1**	Riser	**$27.95**
#4629	**SB-2**	Small Mic Boom	**$60.95**
#0409	**SM-1**	Shock Mount	**$79.95**
#6081	**PRSM-B**	Shock Mount Black	**$99.95**
#2443	**PRSM-C**	Shock Mount Champg	**$99.95**
#4601	**HTM**	TM1 Triple mic mount	**$14.95**
#4630	**WM-1**	Wall Mount	**$21.95**
#2407	**XT-1**	Imped. Match Xformer	**$16.95**

ICOM

PW-1



The Icom **IC-PW1** is a 1000 watt linear amplifier with built-in power supply. This state-of-the-art, heavy duty amp covers HF plus 6 meters. It features auto band changing, four antenna connectors and three cooling fans. The control head is removable and remoteable.
List $6499.00 *Order #2925* **Please Call**

YAESU

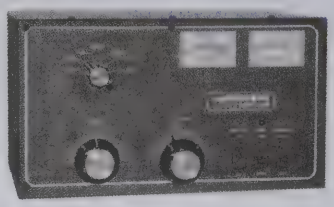
VL1000

The **Yaesu VL-1000** Quadra System high performance linear amplifier covers 160 to 15 and the 6 meter amateur bands. Combined with its matching VP-1000 power supply unit, the VL-1000 is a compact desktop design utilizing rugged MRF150 MOSFETs in a four-unit, push-pull configuration to provide 1000 watts output (500 watts on 6 meters). Automatic band-switching is provided when used with many Yaesu transceivers. Shown above in optional MR-1000 mounting rack. Three year mfg. limited warranty!
List $6999.00 *Order #3641* **Please Call**

Yaesu MR-1000 mounting rack for VL1000.
Order #0000 Discontinued

AMERITRON

AL-811A

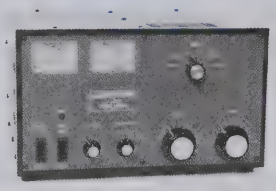


This amp uses three tough *811A* tubes to give you 600 watts of PEP output. 13.75"W x 8.65"H x 16"D. Weight: 31 lbs. (40 lbs. ship).
List $799.00 *Order #1883* **$769.95**

AL-811H

Like the AL-811A, but with four fully neutralized tubes for 800 watts.
List $949.00 *Order #2902* **$899.95**

AL-80B

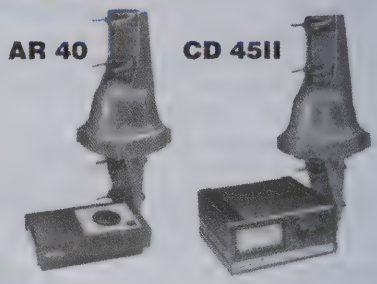


The **AL-80B** combines a single *Eimac 3-500* power tube with a heavy-duty tank circuit for up to 70% plate efficiency. Frequency: 15, 20, 40, 80 and 160 meters. Drive power: 85 watts for full output. RF input power: SSB-1000 watts PEP, CW-850 watts. Power requirement: 120 VAC 15A or 240 VAC 7.5A. Weight: 48 lbs.
List $1495.00 *Order #0575* **$1359.95**

ALS-600

This **Ameritron ALS-600** is amateur radio's *only* linear amplifier that uses four rugged TMOS RF power FETs yielding unequaled no tune solid state performance. Output power is 700 watts PEP with continuous coverage from 1.5 to 22 MHz. Includes amplifier and 120/220 VAC power supply.
List $1499.00 *Order #1760* **$1359.95**

hy-gain



AR303 Extremely Light Duty. Wind: 1.5 sq. ft. 4C
List $89.95 *Order #2032* **$89.95**

AR500 Very Light Duty. Wind load: 1.5 sq. ft. 4C
List $129.95 *Order #6164* **$124.95**

AR40 Light Duty. Wind load: 3 sq. ft. 5C
List $349.95 *Order #2394* **$319.95**

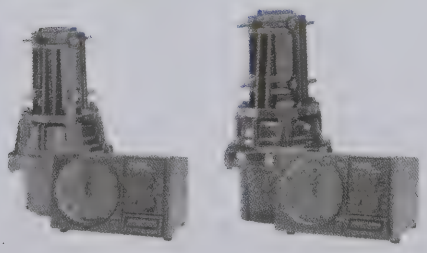
CD45II Light Duty. Wind load: 8.5 sq. ft. 8C
List $449.95 *Order #2393* **$419.95**

HAMIV Medium Duty. Wind load: 15 sq. ft. 8C
List $649.00 *Order #2392* **$599.95**

T2X Heavy Duty. Wind load: 20 sq. ft. 8C
List $799.95 *Order #2391* **$749.95**

YAESU

G-800DXA G-2800SDX



Yaesu rotators are precision-designed for a wide variety of antenna installations. Smooth and quiet in operation, these rotators are housed in weatherproof, die-cast aluminum enclosures and are permanently lubricated.

G-450A Light Duty. Wind load: 10 sq. ft.
List $375.00 *Order #3745* **$299.95**

G-800SA Medium Duty. Wind load: 16 sq. ft.
List $520.00 *Order #4227* **$419.95**

G-800DXA Medium Duty. Wind load: 17 sq. ft.
List $630.00 *Order #4200* **$499.95**

G-1000DXA Heavy Duty. Wind load: 23 sq. ft.
List $790.00 *Order #4148* **$599.95**

G-2800DXA Extra Heavy Duty. Wind : 34 sq. ft.
List $1750.00 *Order #0266* **$1299.95**

G-550 Elevation only
List $520.00 *Order #0113* **$409.95**

G-5500 Azimuth-Elevation
List $945.00 *Order #0180* **$749.95**

Please see **ROTOR CABLE** on page 56.

MIRAGE

Mirage VHF/UHF amplifiers are designed for rugged reliable all-mode operation. There is a model offered for any portable or fixed station installation.

Ant connector types: U=UHF. MM=multimode

Order #	Model	Band	In W	Out W	Mode	Pre	Ant	Required Power	List	Your Price
2671	**BD35**	2 M/440	4	45/35	FM	No	U	12VDC at 7A	$199.95	**$179.95**
3469	**B34**	2 Meter	2	35	FM	No	U	12VDC at 5A	109.95	**102.95**
3468	**B34G**	2 Meter	2	35	MM	Yes	U	12VDC at 5A	129.95	**119.95**
1481	**B310G**	2 Meter	8	100	MM	Yes	U	12VDC at 15A	249.95	**229.95**
3180	**B1018G**	2 Meter	10	160	MM	Yes	U	12VDC at 25A	409.95	**389.95**
2189	**B2518G**	2 Meter	25	160	MM	Yes	U	12VDC at 22A	369.95	**349.95**

YAESU

GS-232B

The **Yaesu GS-232B** Rotor Computer Interface provides digital control of most Yaesu antenna rotators. The 3 wire async serial line can be configured for serial data rates from 1200 to 9600 baud. The unit has a DB-9 male connector for connection to your RS232C port. Supplied items include: Control cable for the Azimuth rotor (5 in to mini DIN), Control cable for the Az/El rotor (Dual 5 pin to DIN cable), DC power cable and hook and loop fasteners. Requires 12 VDC at 110 ma. The Yaesu C1000 cable is required for the SDX series.
List $870.00 *Order #4228* **$629.95**

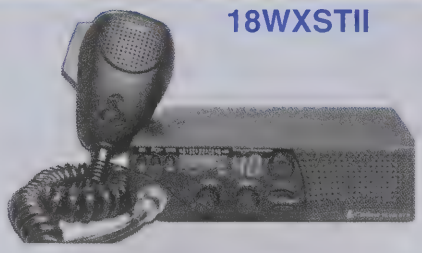
Cobra

19DX^IV

The **Cobra 19DX^IV** contemporary styled 40 channel compact CB has an LCD, S-meter, PA and instant channels 9 and 19. 4.6 x 1.8 x 6.8"

Order #3718 **$49.95**

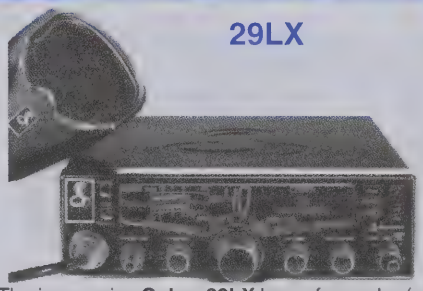
18WXSTII



The **Cobra 18WXSTII** features: LED S/RF meter. and LEDs for RX, TX and WX. Yes, you can receive ten NOAA weather channels. Cobra's SoundTracker® technology significantly reduces the amount of static on all incoming CB signals. It is further optimized when two SoundTracker® CB's are communicating. Front firing speaker and instant channel 9/19.

Order #1297 **$89.95**

29LX



The impressive **Cobra 29LX** has a four color (red, blue, green or amber) selectable display plus day and night illumination settings. Receive ten NOAA channels with scan and weather alert functions. Of course you get 40 channels with memory scan and full frequency display. With the professional driver in mind, there is a working clock, on-duty drive timer and alarm function with snooze. Has instant channel 9/19, SWR calibration antenna warning and full metering. Requires 13.8 VDC at 1.5 amps.

Order #5522 **$119.95**

HH38WXST R

The **Cobra HH38 WX ST *RoadTrip*** is a powerful 4 watt, 40 channel handheld walkie talkie with 10 NOAA weather channels. This model features: SoundTracker® technology, instant channel 9 and a backlit display. With: cigarette lighter cord, flex antenna, and auto mag mount antenna. Requires 9 AA cells, not included.

Order #2307 **$89.95**

25WXNWST

The **Cobra 25WXNWST** NightWatch 40 channel CB has a classic white-silver appearance during the day and a fully backlit appearance at night. It has Cobra's SoundTracker® system, dimmer, 7 NOAA weather channels, NB, ANL, RF gain and illuminated analog S/RF meter. 7.25 x 2.25 x 8.7".

Order #4001 **$129.95**

29WXNWST

The **Cobra 29WXNWST** has the Cobra NightWatch® electroluminescent illumination with dimmer for easy viewing at night.. This 40 channel CB has: NB, ANL, illuminated analog S/RF/SWR meter, 4 pin hand mic with 9 foot cord, RF gain plus LEDs for RX/TX and antenna warning. Requires 13.8 VDC at 1.5A. 8.75 x 2.25 x 7.25" 4 pounds.

Order #5428 **$139.95**

29LTDBT

The **Cobra 29LTDBT** supports the integration of a BlueTooth cellular telephone (not supplied). See our website for details.

Order #5069 **$159.95**

uniden Bearcat

PRO401HH

The **Uniden PRO401HH** 40 channel handheld CB features: 4 Watts RF output, transmit light, ANL/AGC, squelch and internal battery charging. With: belt clip, wrist strap, vehicle cigar-plug DC power cable, flexible BNC antenna and manual. This radio requires 9 AAs (not included). The AA batteries may be alkaline or rechargeable — selectable by an internal switch.

Order #0401 **$51.95**

29NWLTD

The **Cobra 29NWLTD** NightWatch features NB / ANL noise reduction, CB/PA, Dimmer, RF gain, analog S/RF/SWR meter, NightWatch illumination, and Dynamike control. You also get an RF gain plus LEDs for RX/TX. With 4 pin hand mic. Requires 13.8 VDC at 1.5 amps. 7.5 x 2.5 x 9 inches.

Order #5041 **$124.95**

uniden Bearcat

880

The **Uniden Bearcat 880** 40 channel CB radio features a stunning front panel with seven color selectable display back lighting and you can adjust brightness and contrast independently. Built-in diagnostics check the antenna match, RF power and supply voltage. Other features include S/RF/CAL/SWR Meter, PA, NOAA weather, frequency display, noise blanker, mic gain, all channel scan, memory scan, RF gain and instant channel. With a 6 pin, noise-canceling mic and mic clip. 6.3 x 2.2 x 6.3".

Order #3880 **$119.95**

uniden Bearcat

980SSB

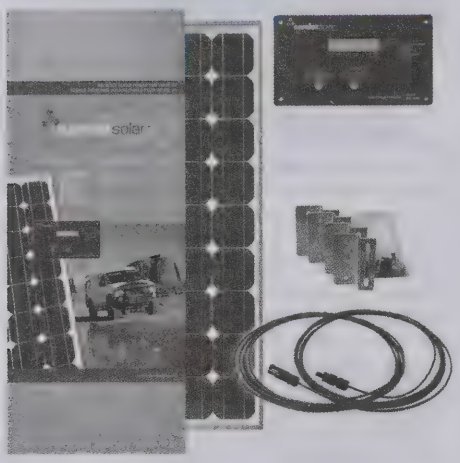
The **Uniden Bearcat 980SSB** 40 channel CB radio operates in normal AM *and* **SSB**-Single Sideband. It has a stunning front panel with seven color selectable display back lighting with adjustable brightness and contrast. Built-in diagnostics check the antenna match, RF power and supply voltage. Other features include S/RF/CAL/SWR Meter, PA, NOAA weather, frequency display, noise blanker, mic gain, all channel scan, memory scan, RF gain and instant channel. Comes with a 6 pin, noise-canceling mic with extra long cord, mobile bracket and mic clip. 6.3 x 2.2 x 6.3".

Order #2980 **$149.95**

Wilson Antenna

Our most popular mobile CB antenna is the **Wilson Little Wil**. The 37 inch Little Wil includes magnetic mount plus coax and can handle up to 300 watts *#3933* **$34.95**. Visit our website to view other available CB antennas.

samlexamerica SRV100-30A



The **Samlex SRV100-30A** solar charging kit comes with a high efficiency 100 Watt solar panel, a 30 Amp charge controller, connecting wires, aluminum mounting brackets and hardware that can be used to secure the solar panel to the roof of your remote structure or vehicle, or any other flat surface. The SRV100-30A charging kit includes the advanced SCC-30AB charge controller featuring: microprocessor control, 30 Amp charging capacity, battery equalization, digital LCD display of voltage, current and battery AH, 8 charge settings for different battery types, optional remote temperature sensor, 4 stage charging with LED indicators and dual 12V/24V voltage capability. Panel size: 47.48 x 21.73 x 1.38".

Order #6339 **$549.95**

samlexamerica MSK-90

The **Samlex MSK-90** solar charging kit is portable easy to use! Just unfold, plug in and start charging. Capture the power of the sun without complicated installations, brackets or electrical diagrams. The 10 Amp controller is built into the back panel. Adjustable legs allow for easy directing. Each kit comes with a convenient insulated carrying case that also protects the panels when stored. This extremely well constructed, quality item includes: two 45 Watt solar panels, 10 amp charge controller on back panel, pair of Anderson connectors and battery clamps, 32 foot cable and insulated carrying case.

Order #6340 **$349.95**

MFJ-144RC

The **MFJ-144RC** forecast station shows: time in 12/24 hour format (and may be set to UTC!), indoor and outdoor (-39° to 140° F) temperature and forecast icon. The atomic clock sets itself to WWVB. The 2¼ inch clock digits are easy to read. Alarm and Daylight Savings functions are supported. Displays in English, Spanish or French. Includes outdoor wireless sensor operating at 915 MHz with a range of up to 330 feet. This clock is 12 x 8 inches and may be set on a table or hung on a wall. Requires 4 AA batteries (not included).

Order #1821 **$39.95**

MFJ-195RC

The **MFJ-195RC** forecast station shows: indoor and outdoor temperature [-21.8° to 156.2° F in 0.1° resolution], with min/max, indoor humidity, and has a forecast icon based on changing air pressure. The time display is radio controlled and automatically sets. It can display any time zone from GMT to -12 hours GMT, in either 12 or 24 hour format. The included TX6U remote temperature sensor must be placed within 80 feet of the main unit. Requires four AA cells (not provided). May be hung or used free standing,

Order #5897 **$39.95**

MFJ-151RC

The **MFJ-151RC** color weather station has forecast icons for: sunny, partly sunny, cloudy, rainy or stormy. It shows heat index and dew point, indoor (32 to 122°F) and outdoor temperature (-40 to 140°F) and humidity. The outdoor sensor transmits up to 200 feet. The 12/24 hour atomic clock will work in all US time zones. Daylight savings time can be turned off. Press a button to light the display (or continuous lighting with included AC adapter). There is an LCD light dimmer for nighttime use. Has snooze alarm and alarm icon. Sits upright on night stand or desktop. Two AA batteries are needed for the sensor and three for the console (not included). 6.25 x 4 .3 x 2.75".

Order #6221 **$44.95**

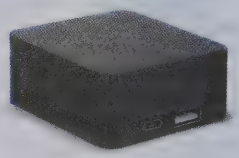
✔ See **weather receivers** on page 29.

eton BT2000

The **Eton Boost Turbine 2000** lets you charge your mobile device anytime, anywhere. The Boost Turbine is made of tough, but lightweight aluminum with a sleek and elegant design that will fit right in your pocket. Fast and efficient, one minute of turning will power a 30 second call or a few critical texts. When fully charged it will fully recharge most smartphones. It features an integrated 2000 mAh Li-ion battery, a 4 LED charge indicator, standard USB output and micro-USB input. Supplied with micro-USB cable. Available in black, silver, red or white. 3.3 x 7 x 1.5" 13 oz.

#5992	**BT2000 BLK**	Black	**$39.98**
#5994	**BT2000 RED**	Red	**$39.98**
#5993	**BT2000 SIL**	Silver	**$39.98**
#5995	**BT2000 WHT**	White	**$39.98**

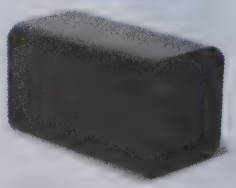
eton BB4000



The **Eton BoostBloc 4000** backup battery pack provides long-lasting reliable power whenever and wherever you need it. When fully charged, the BoostBloc 4000 fully charges most smartphones two times, so you're never caught powerless. It features an integrated 4000 mAh Li-ion battery, a 4 LED charge indicator, standard USB output and micro-USB input. Supplied with micro-USB cable. Available in black or white. 2.2 x 1 x 2.2" 4 oz.

#5998	**BB4000 BLK**	Black	**$39.98**
#5997	**BB4000 WHT**	White	**$39.98**

eton BB6600



The **Eton BoostBloc6600** is a backup battery pack that when fully charged will in turn charge most smartphones multiple times and even larger tablets like the iPad. It has dual USB charging ports so you can charge two phones, or an iPad and a phone simultaneously. It features an integrated 6600 mAh Li-ion battery, a 4 LED charge indicator, dual standard USB outputs and micro-USB input. Supplied with micro-USB cable. An LED charge indicator lets you monitor the battery charge level. Available in black or white. 2.2 x 1 x 2.2" 4 oz.

#6023	**BB6600 BLK**	Black	**$79.98**
#2854	**BB4000 WHT**	White	**$79.98**

COFFEE MUG

This attractive cobalt blue mug features the Universal Shortwave globe logo and lettering in white and red. Holds 10 ounces.

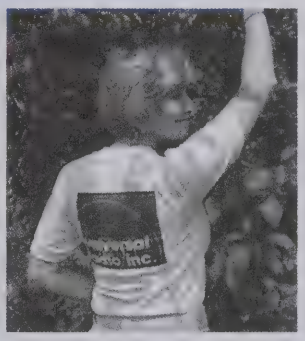
Universal Mug *Order #5605* **$6.95**

CASE

This padded canvas carrying case is just right for transporting and protecting your larger portable radio. With shoulder strap and zippered side pocket. 12 x 8 x 4 inches. Black with Universal Radio globe logo.

Universal Case *Order #0395* **$29.95**

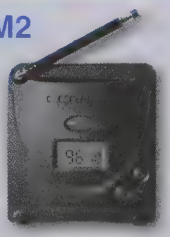
UNIVERSAL TEE-SHIRTS



This comfortable Universal tee-shirt is a 50/50 cotton blend and features a small logo on the front and a large logo on the back. The tee shirt is white and the logo is deep blue.

Small	*Order #4386*	**$10.95**
Medium	*Order #4387*	**$11.95**
Large	*Order #4388*	**$12.95**
X Large	*Order #4389*	**$13.95**
XX Large	*Order #4390*	**$14.95**
XXX Large	*Order #4391*	**$15.95**
XXXX Large	*Order #4392*	**$16.95**

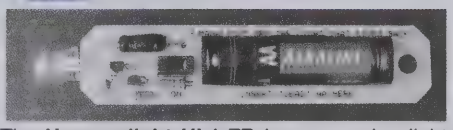
C.CRANE FM2



The **C. Crane FM2** FM transmitter is the easy way to send audio from your PC or XM radio to any FM receiver in your home. The FM2 will transmit full stereo from 88.3 to 107.7 MHz. The LCD shows you the selected frequency. The approximate line-of-sight range is 70 feet (walls and metal objects will reduce range). Operates from included AC adapter or two AA cells (not supplied). 3.1 x 3.5 x 1.1 inches 5.8 oz. The input to the FM2 is an audio cable with a 3.5mm stereo plug.

FM2 *Order #5744* **$59.95**

HL1-FR



The **Humanalight HL1-FR** is an amazing light source kit. It was developed by the *Ears To Our World* nonprofit organization that specializes in the distribution of self-powered world band radios and other appropriate technologies to schools and communities in remote, rural and impoverished regions of our world. This simple light source is powered by a single AA cells. And how long does it last? Not 5 hours, not 5 days, but up to 5 *weeks!* The simple circuit *dramatically* extends the life of the AA cell. You can even insert a "dead" AA cell, and it will light for days. Another benefit of this item is that it makes a great first soldering project. And when you are finished you have a useful device. Basic instructions are included and are also available on the *ETOW* website. A third benefit of this item is that it helps support the great humanitarian work that *Ears To Our World* is doing worldwide. To build this kit the following materials and tools are required: low wattage (25-45W) soldering iron with pencil tip, diagonal or flush cutting pliers, long-nose pliers, thin rosin-core electronics solder and one AA.

HL1-FR *Order #0814* **$15.95**

C.CRANE USB3

The **C. Crane Super USB3** WiFi Antenna is your answer to increased WiFi range. The antenna incorporates a water resistant design for indoor or outdoor use (IP65 rated), along with wireless "N" technology for lightning fast file transfers with your "N" router. With an up to 1 mile range, it is great for using your laptop in the backyard or from an out building. It simply plugs into a unused USB port on your PC (or use two USB ports for even greater range). Compatible with 802.11 B, G, and N. Up to 150 Mbps. WEP, WPA, WPA2, WPS encryption compatible. Windows XP, Vista 32/64, Windows 7 32/64, Windows 8, MAC OS 10.4-10.8. Only 1.4 x 10 x 0.6 inches. 1.8 oz.

USB3 *Order #5888* **$89.95**

MFJ-1709

The **MFJ-1709** foot switch is great for boom mic headphones to keep your hands free. 2.5 x 1.25 x 3.5 inches with non-skid pad with cushioned foot pedal. 1/4 inch phone plug. Ten foot cord.

MFJ-1709 *Order #5463* **$19.95**

TRAVEL MUG

This bright orange travel mug has a removable lid with a sipping valve you can open and close. It features the Yaesu logo and holds 16 oz. Made in the U.S.A. by Omega.

Travel Mug
Order #1632 **$4.95**

DENIM SHIRTS

The Port Authority® button-down, casual classic faded denim is prewashed. These quality shirts feature the Icom (white/red) or Yaesu (orange/black) logo, embroidered on the front pocket. In six sizes.

Icom Logo			Yaesu Logo		
Medium	*Order #4919*	**$24.95**			
Large	*Order #4920*	**$25.95**	**Large**	*Order #4937*	**$28.95**
X Large	*Order #4921*	**$26.95**	**X Large**	*Order #4938*	**$29.95**
XX Large	*Order #4922*	**$27.95**	**XX Large**	*Order #4939*	**$30.95**
XXX Large	*Order #4923*	**$28.95**	**XXX Large**	*Order #4940*	**$31.95**
XXXX Large	*Order #4924*	**$29.95**	**XXXX Large**	*Order #4941*	**$32.95**

POCKET KNIFE

This five function pocket knife with Yaesu logo features: a blade, nail file, scissors, toothpick and tweezers.

Pocket Knife *Order #1609* **$4.95**

Associated ARC109 ARC110

How do you safely connect a PL-259 to the SMA jack on your handheld radio without stressing the radio's connector? The answer is the ARC109 cable assembly. It is made with 4 feet of very low loss LMR-100® coax cable (*not* high loss RG174!). More cables on page 56.

ARC109 *Order #4513* **$18.95**

Same 4 foot cable but SO-239 to BNC male.

ARC110 *Order #4512* **$17.95**

A.R.R.L. AMATEUR RADIO STATION MINI LOG

This popular, spiral bound 6.25 x 4 inch mini log has headings for: Date, Time, Frequency, Mode, Station Worked, Report Sent, Report Received, Comments. 96 pages are for recording 720 contacts. *ARRL.*

Order #4057 ..... **$4.95**

A.R.R.L. DXCC LIST

Record the DXCC Entities you've worked and QSLed! This new edition includes a complete listing of DX Century Club rules. It contains information about each entity on the DXCC List, deleted entities, and the latest DXCC Entity additions. Also included are a prefix cross-reference, the list of international call sign series and more. ©2012 *A.R.R.L.*

Order #5922 ..... **$5.95**

C.CRANE CC Witness+

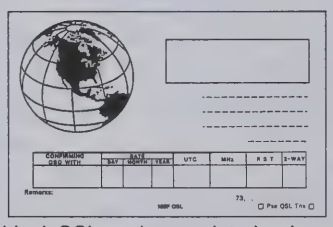
The **C. Crane CC Witness *Plus*** is a digital recorder/MP3 player *plus* AM and FM radio. Designed for the radio aficionado, it has 2GB of onboard memory and up to 16GB of external memory on an SD card (not supplied). You will have plenty of room to store hundreds of hours of recordings. Don't miss your favorite radio show! It can record up to 20 programs in advance and you can also make MP3 recordings of AM/FM radio programs on the fly. Record meetings, memos, language lessons or even that memoir you've been wanting to write! And you can use it as an MP3 player to play back your songs or audio books. This new *Plus* version features stereo microphones, CD quality (WAV format) recording, and a mini USB jack. 2.2 x 4 x 0.6 in. 3.6 oz.

C Crane CWTPL *Order #5929* **$149.95**

Accessory kit with AC adapter, charging cradle and a protective case.

C Crane PLACC *Order #2285* **$39.95**

QSL CARDS



These blank QSL cards are printed on heavy 65# parchment stock. All pertinent information is provided on the front side for your convenience.

Package of 100 QSLs.

Globe QSL *Order #1116* **$4.95**

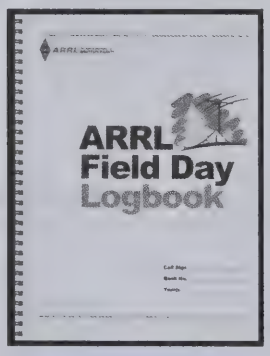
SANGEAN DAR-101

The **Sangean DAR-101** digital MP3 audio recorder offers high specification recording. It has three recording densities: 64k, 128k or 192k bps. It has a built-in 3 inch monitor speaker and clock. Recording sources include: Internal/External mic, telephone and line-input. It supports MP3 and WMA (Windows Media Audio) media with SD card or USB interface. The USB port on the DAR-101 is only for flash memory use (playback). To transfer files one needs to have a SD card reader on the host computer. Then use an SD card (not supplied) to transfer files to a PC. (Direct connection to the host computer via the USB is not possible). The DAR-101 operates from four AA cells (not included) or included AC adapter. The AA cells may be alkaline or rechargeable. There is a switch in the battery compartment that must be selected, based on battery type. Recording telephone conversations without both parties' knowledge and consent is illegal in most states. Please consult your local authorities. A record beep function is supported in this device.

DAR-101 *Order #4101* **$99.95**

UNIVERSAL BUYS RADIO

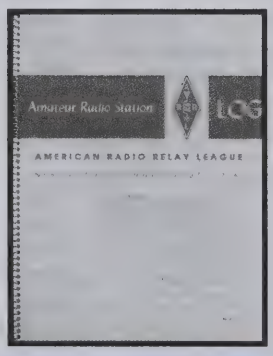
Turn equipment you are not using into cash. Universal purchases clean radio gear. Call, email or write and tell us what you have to sell. We will provide an immediate quote (subject to inspection).



A.R.R.L. FIELD DAY LOG BOOK

This special *Field Day* log book includes log sheets, dupe sheets, VHO Operating Tips, Band Chart, WAS map and much more. A great way to keep track of your involvement in this popular, annual operating event! ©2012 *ARRL.*

Order #3955 ..... **$7.95**



A.R.R.L. AMATEUR RADIO STATION LOG

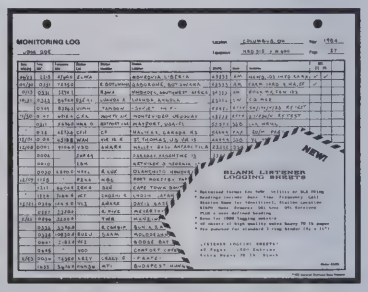
This popular 8½" x 11" log is bound with a metal spiral. Headings are: Date, Frequency, Mode, Power, Time, Station Worked, Report Sent, Report Received, Time Off, Comments, QSL Sent and QSL Received. ©1989 *ARRL.*

Order #0773 ..... **$7.95**

UNIVERSAL AMATEUR RADIO STATION LOG

This 8½" x 11" log is spiral-bound. The log headings are: Date, Time Start, Time End, Frequency, Mode, Station Worked, Signal Report (His-Mine), QTH, Comments, QSL Sent, QSL Received and Zone. 30 pages. ©1989 *Universal Radio Research.*

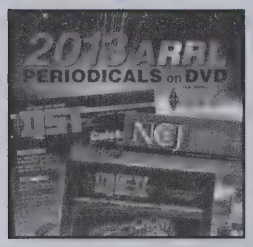
Order #2845 ..... **$4.95**



SHORTWAVE LISTENER LOGGING SHEETS

These sheets have been designed to include all the information from your listening. Headings include: Date, Time, Frequency, Call, Station ID, Location, SINPO, Mode, Remarks, QSL Sent and QSL Received. 40 sheets for 1000 loggings.

Order #2886 ..... **$4.95**



ARRL PERIODICALS

Get all the year's issues of: *QST, QEX* and the *National Contest Journal* on one CD-ROM. For years 2012 and after, it is a DVD. *A.R.R.L.*

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- **ARRL Periodicals 1996**
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- **ARRL Periodicals 1997**
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- **ARRL Periodicals 1998**
  Order #3775 ..... **$19.95**
- **ARRL Periodicals 1999**
  Order #4169 ..... **$19.95**
- **ARRL Periodicals 2000**
  Order #0000 .... Disc.
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  Order #1287 ..... **$19.95**
- **ARRL Periodicals 2006**
  Order #0000 .... Disc.
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- **ARRL Periodicals 2012**
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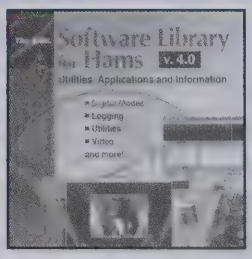
YouTube
Check out our product videos on our **YouTube** channel:
UniversalRadioInc



ARRL SOFTWARE LIBRARY FOR HAMS v4

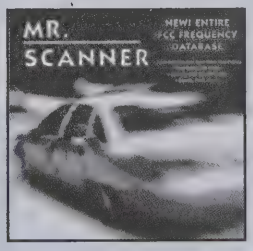
Get all kinds of ham radio software: CW Decoder Morse code translator, WinDRM digital voice software and HF digital software for PSK31, MFSK16, MT63, Slow-Scan TV, Digital SSTV, RTTY, APRS®, JT65, packet radio and satellite tracking. *ARRL* ©2012. List $22.95.
Order #5858 ..... **$19.95**

ARRL SOFTWARE LIBRARY FOR HAMS v3

Close-out. *ARRL* ©2009.
Order #2113 ..... **$13.98**

50 YEARS OF AMATEUR RADIO INNOVATION - CD SUPPLEMENT

This CD includes 825 *more* fabulous radio and accessories from 1930 to 1980. It is a wonderful supplement to the book *50 Years of Amateur Radio Innovation* (page 128).
Order #5623 ..... **$18.95**



MR. SCANNER's FCC FREQUENCY DATABASE

This CD includes: PD, FD, RR, Marine, Wx, Space, Air, Utilities, etc. For: Windows 2000 and up.
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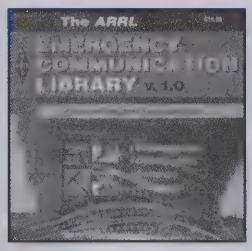

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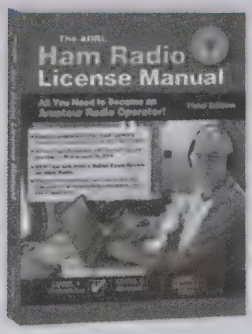

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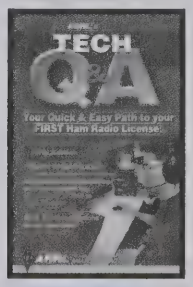

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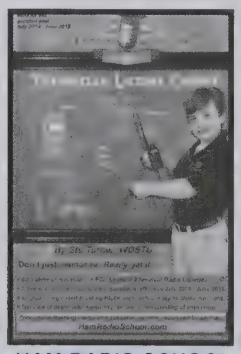

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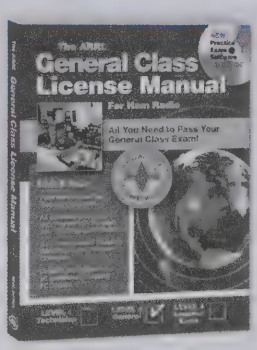

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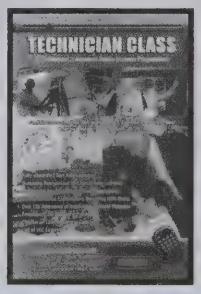

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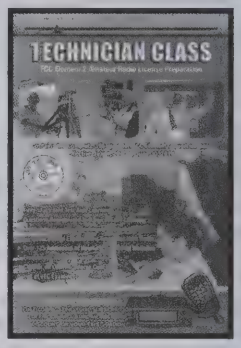

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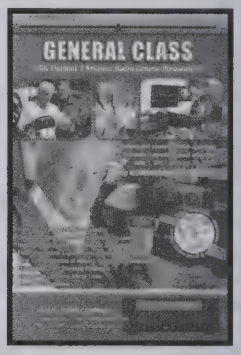

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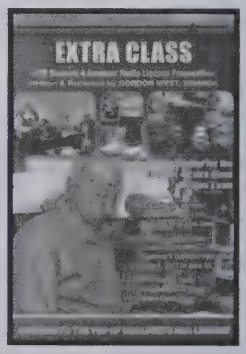

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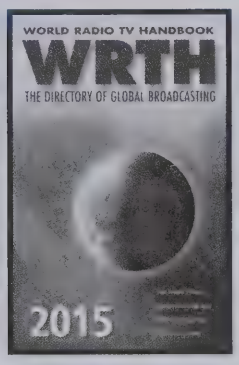

WORLD RADIO TV HANDBOOK 2015

This long established publication is filled with schedules, frequencies and addresses of shortwave broadcast stations. Organized primarily by country. Also includes a by-frequency listing of shortwave broadcast stations, radio club info., plus receiver reviews. *WRTH Pub.* 2014 69TH Edition. List price $34.95.

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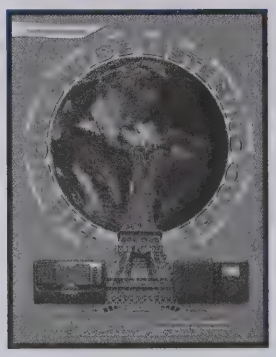

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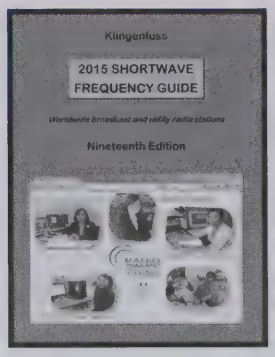

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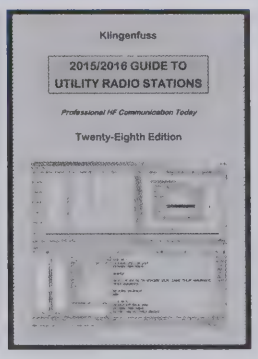

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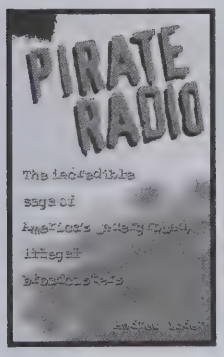

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By Yoder. A behind the scenes look at the incredible saga of America's underground, illegal broadcasters. From early pirate broadcasting to today's pirates. It's all here. The **included audio CD** features segments from some of the most famous, infamous and notorious pirate stations. ©1995 *HighText.* 326 p.

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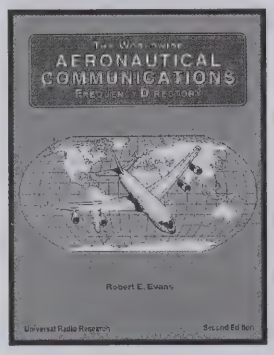

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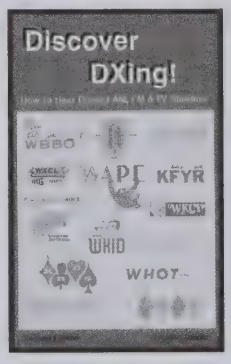

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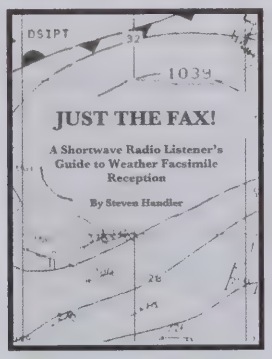

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By Steven Handler. The shortwave bands are buzzing with the sounds of a fax machine. With the right equipment and this book you can see these interesting transmissions. Includes an introduction to fax transmissions FAX stations by frequency and time ordered list of scheduled fax transmissions. ©2012 39 pages.

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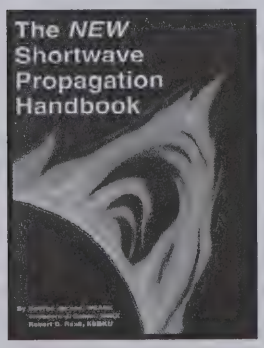

THE NEW SHORTWAVE PROPAGATION HANDBOOK

By Jacobs, Cohen & Rose. A comprehensive review of the principles and theories of shortwave propagation prediction. Reviews: ionosphere, sunspot cycles, forecasting, unusual HF & VHF propagation, etc. Generous use of charts and diagrams makes it understandable for hams & SWLs. ©1995, 1997 *CQ* 150 p.

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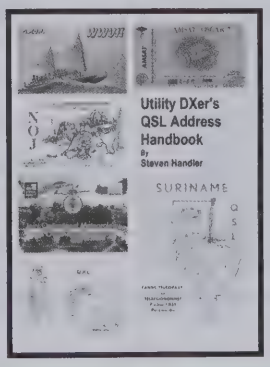

UTILITY DXer'S QSL ADDRESS HANDBOOK

By Steven Handler. This well researched book contains the postal *and* e-mail addresses of many shortwave utility stations located on all seven continents. Most listings also show type of QSL they issue, preferred method of contact and verification signers. There are over 40 QSL images (half in color). ©2012 56 p.

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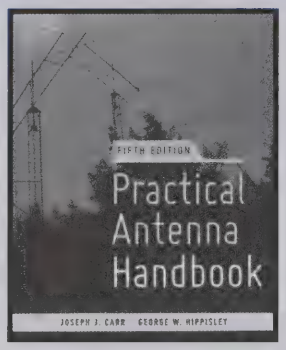

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By Joe Carr & George Hippisley. This book covers all types of antennas. Includes: dipoles, verticals, multiband wire, long-wire directional, hidden, phased verticals, beams, shortwave, VHF/UHF, marine, microwave, mobile antennas and grounding. 5th Ed. ©2011 *TAB* 784 p. List $50.00.

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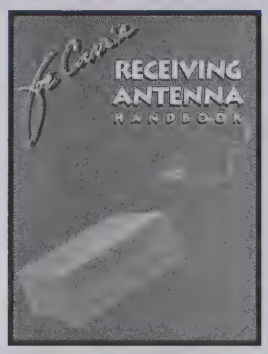

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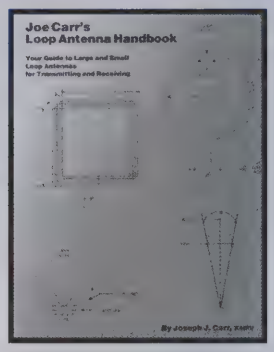

JOE CARR'S LOOP ANTENNA HANDBOOK

By Joe Carr. Here is a comprehensive, but readable guide to understanding and building loops for longwave, medium wave, shortwave and VHF. Loop antennas can be very effective, even if you have limited space and a tight budget. Many diagrams and illustrations. *URR.* ©1999 133 p. List $19.95.

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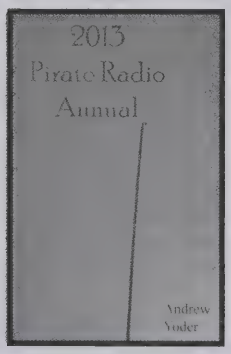

PIRATE RADIO ANNUAL 2014

By A. Yoder. Pirate radio is surely an interesting and controversial subject. But no one can debate that pirate radio is alive, well and offers a tremendous range of programming. The author introduces the topic, provides insights on tuning and QSLing pirates and provides an extensive review of pirate activity in the previous year, covering both domestic and international pirate stations heard in North America. This book includes an audio CD of scores of different pirate stations! ©2014 *Cabinet.* (Cover shown is from 2013 Edition). The new 2014 edition is expected December 2014.

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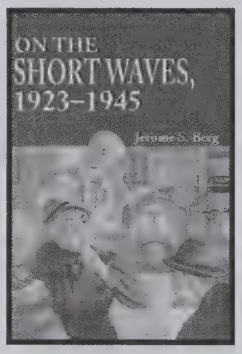

ON THE SHORTWAVES 1923-1945

By Jerome S. Berg. Here for the first time is the complete history of the pioneer days of shortwave broadcast, from the early concepts of Marconi & Armstrong, through the Golden Era of the 1930's and finally through World War II. A beautiful, fully illustrated reference for every SWL. Softcover. *McFarland* 272 p.

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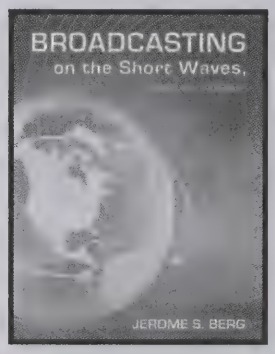

BROADCASTING ON THE SHORTWAVES 1945 TO TODAY

By Jerome S. Berg. The heart of the book, *Shortwave Year-by-Year* is a detailed account of the shortwave bands in each year from 1945 to present. It reviews what American listeners were hearing on the shortwave bands, describes the arrival and departure of stations, and recounts important SW events. ©2008 *McFarland* 488 p. Soft. List $35.00.

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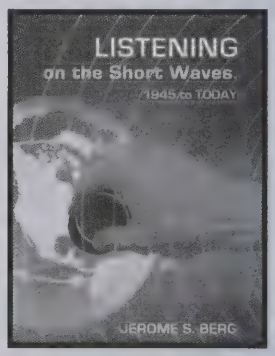

LISTENING ON THE SHORTWAVES 1945 TO TODAY

By Jerome S. Berg. Written from the standpoint of the serious shortwave enthusiast, this book examines the histories of the major North American shortwave clubs, DX programs, a chronology of the shortwave receivers, how receiver technology impacted listening plus PCs and shortwave listening. ©2008 *McFarland* 415 p. Soft. List $39.95.

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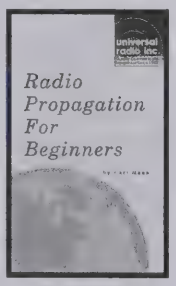

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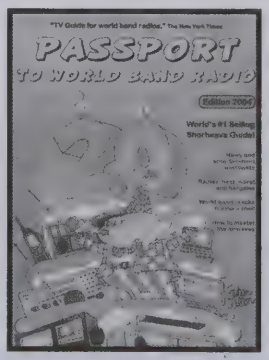

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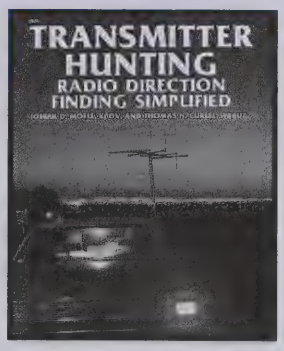

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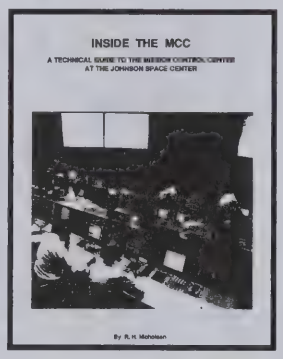

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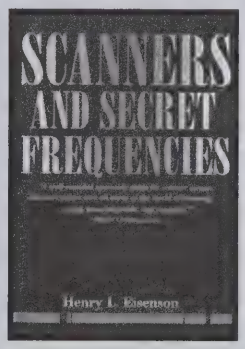

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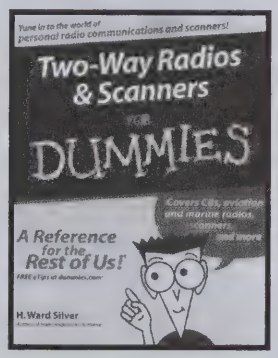

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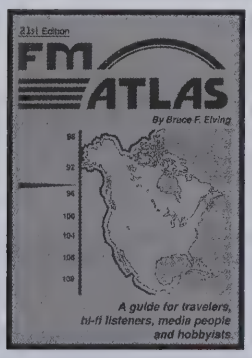

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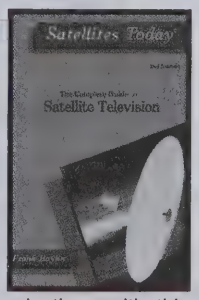

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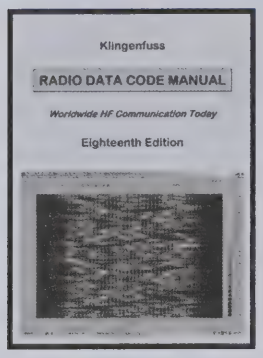

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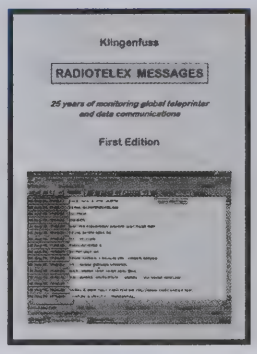

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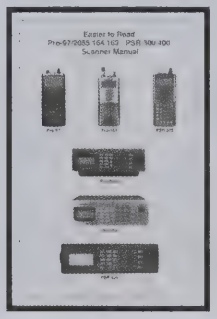

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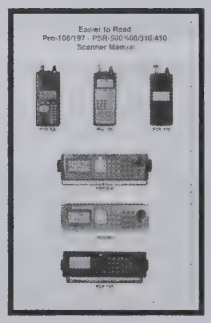

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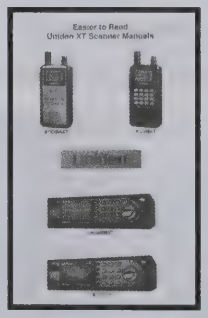

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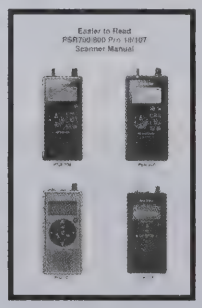

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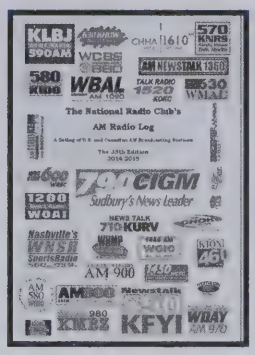

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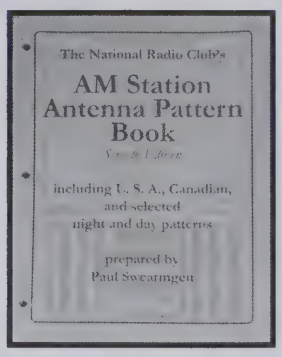

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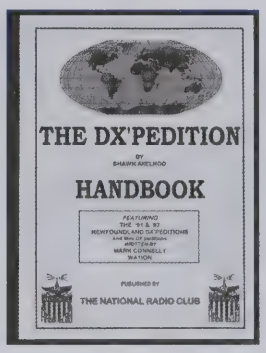

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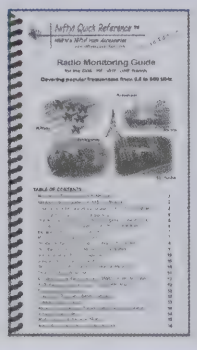

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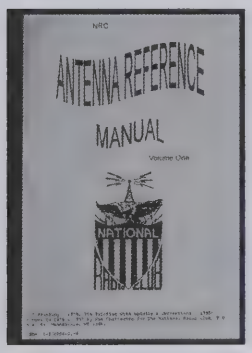

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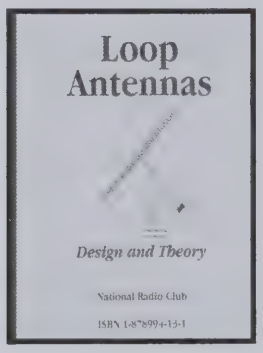

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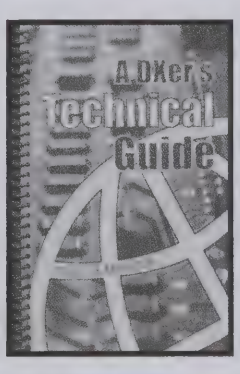

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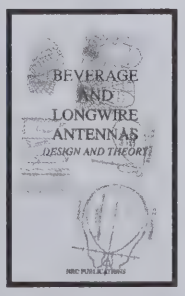

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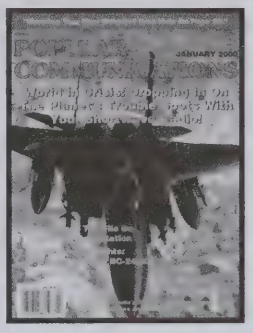

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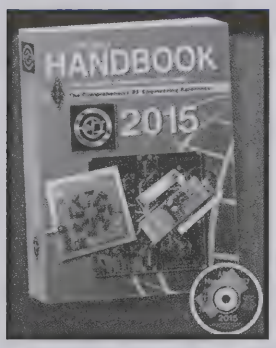

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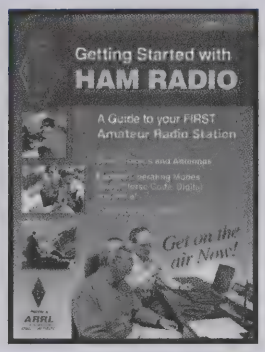

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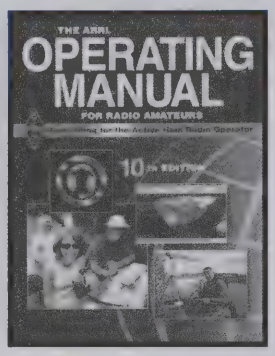

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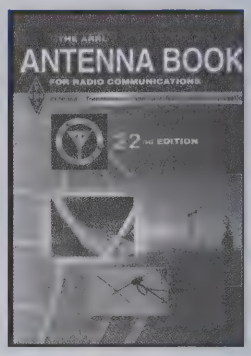

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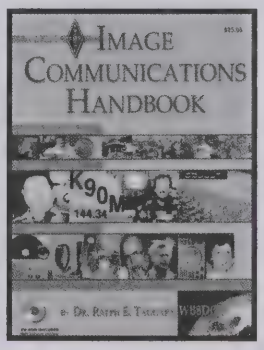

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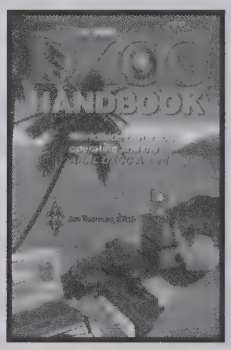

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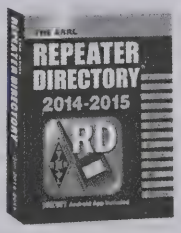

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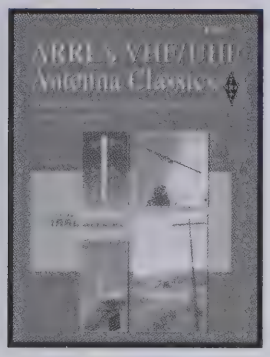

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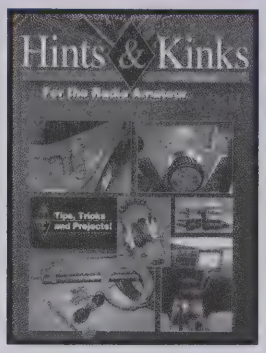

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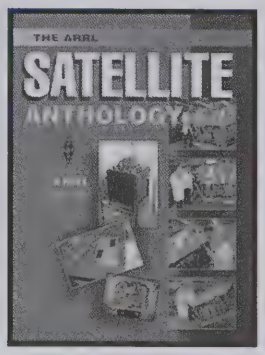

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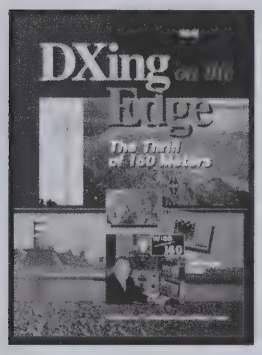

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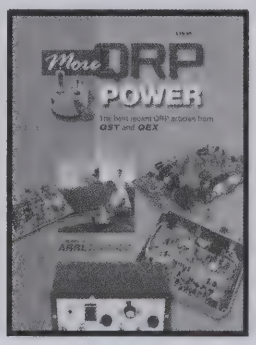

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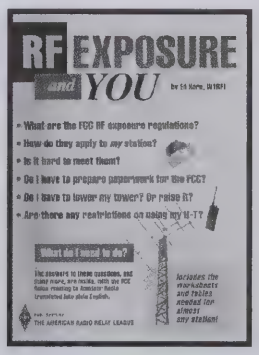

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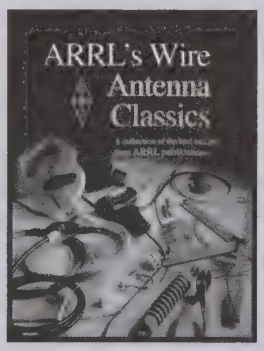

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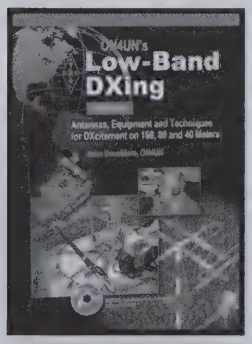

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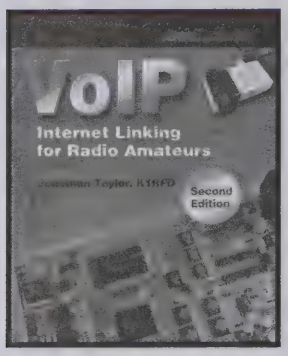

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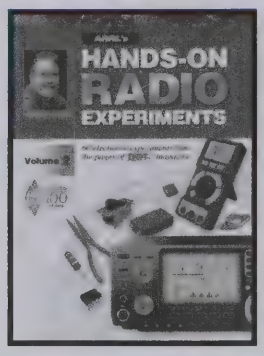

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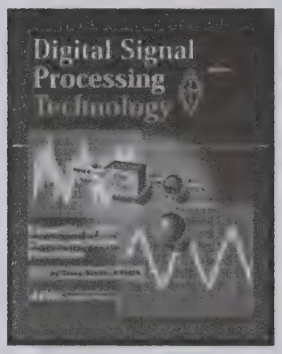

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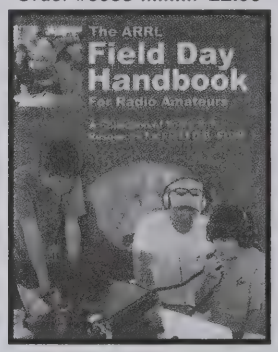

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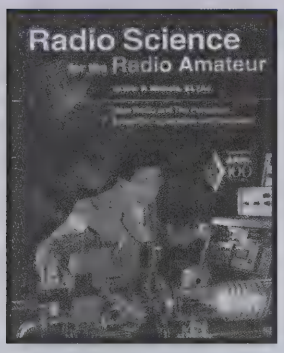

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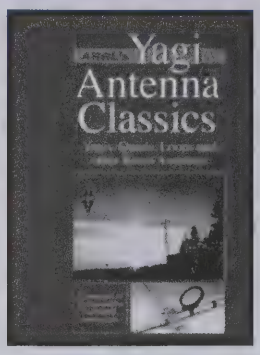

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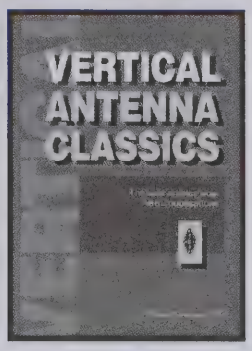

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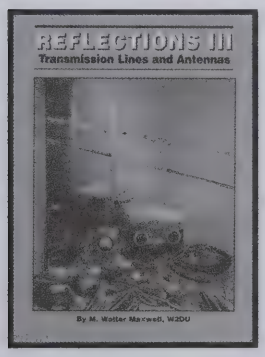

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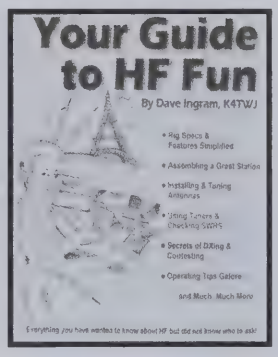

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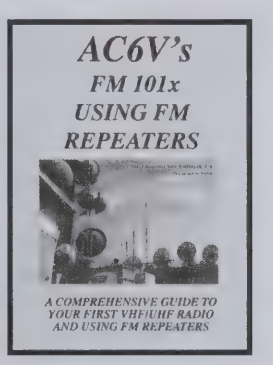

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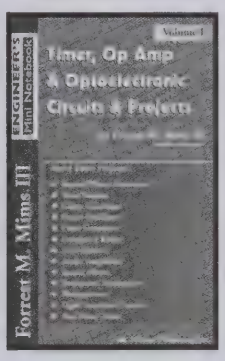

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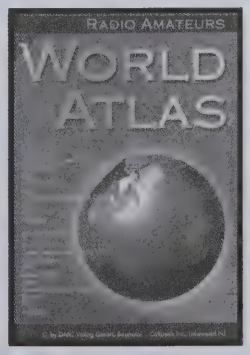

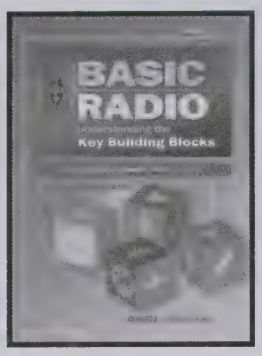

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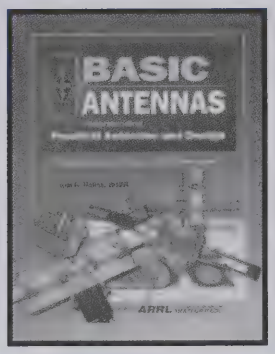

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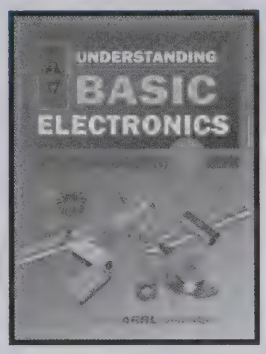

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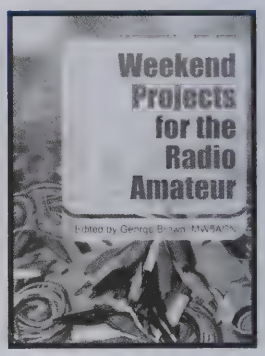

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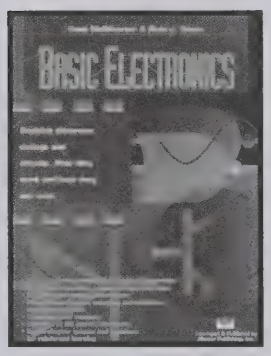

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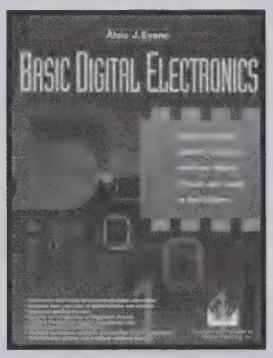

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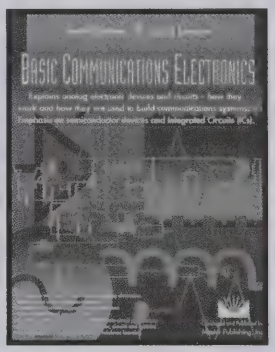

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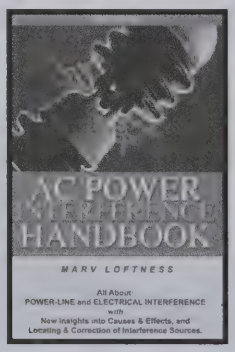

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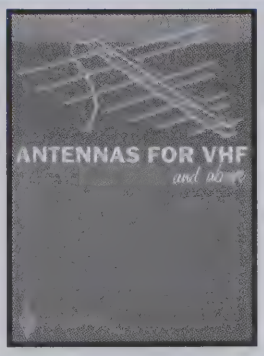

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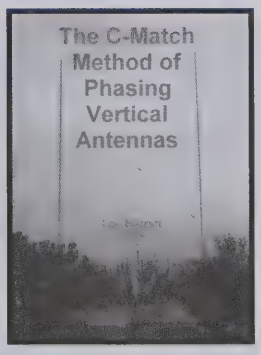

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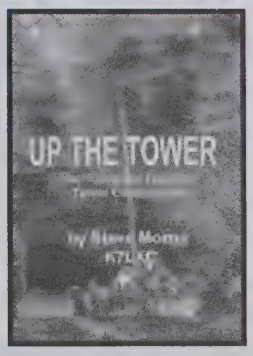

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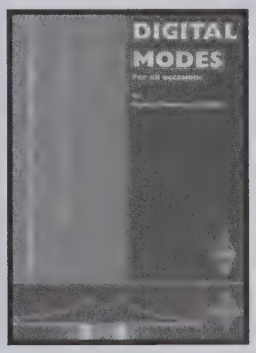

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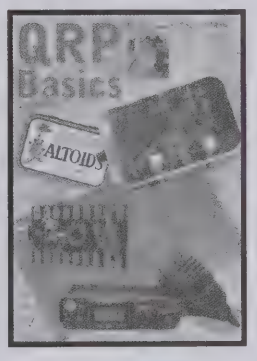

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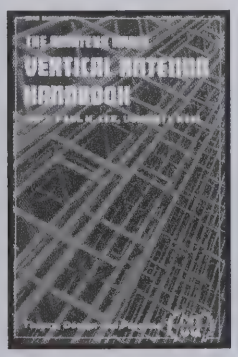

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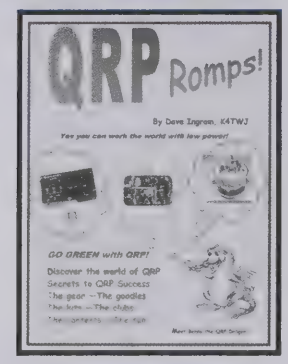

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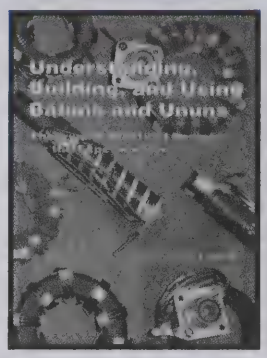

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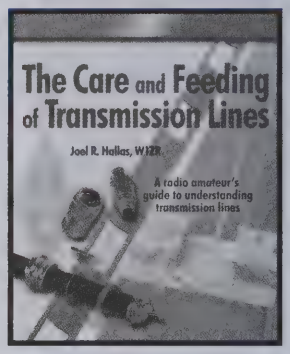

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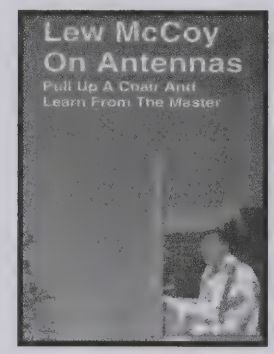

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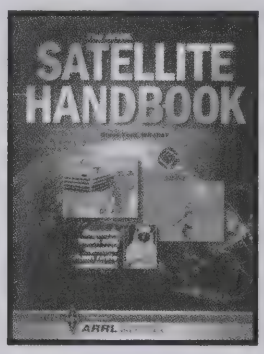

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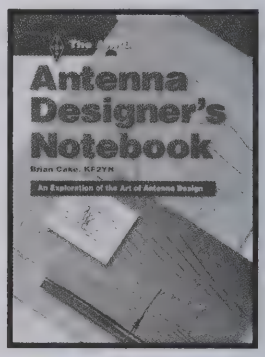

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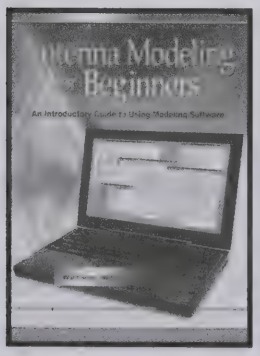

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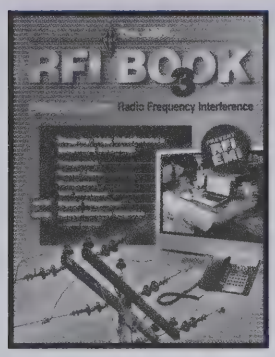

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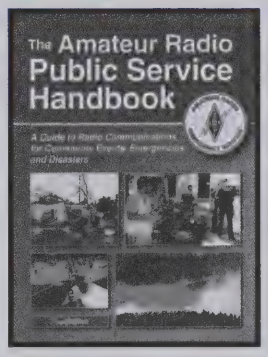

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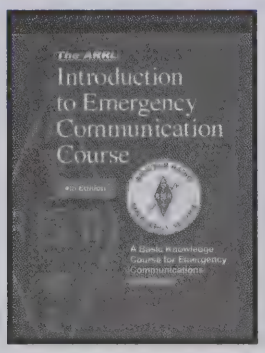

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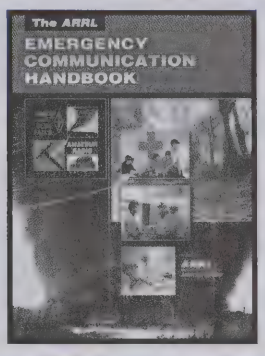

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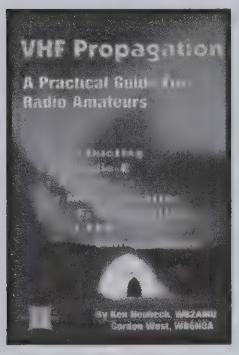

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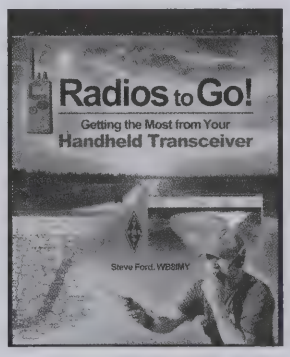

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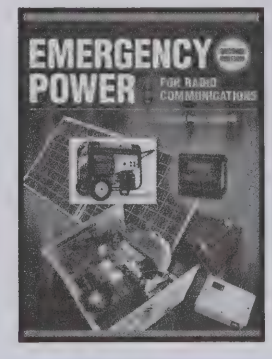

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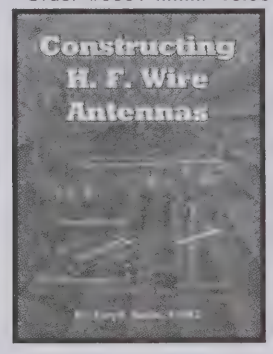

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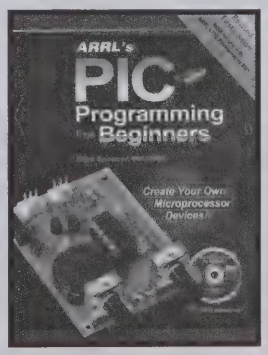

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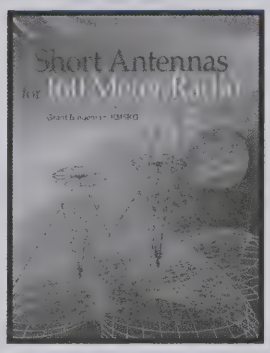

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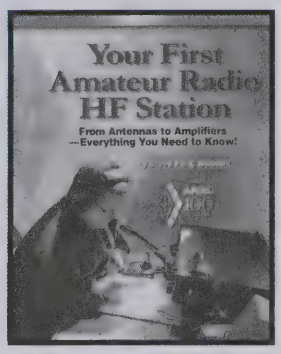

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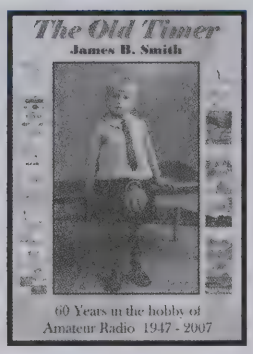

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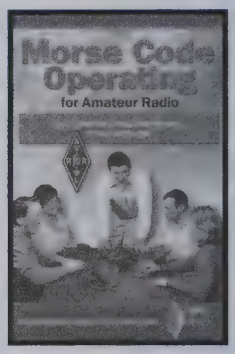

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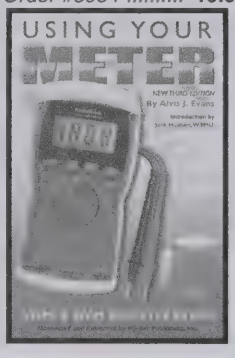

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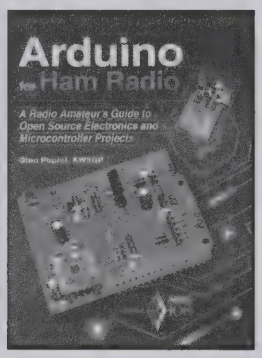

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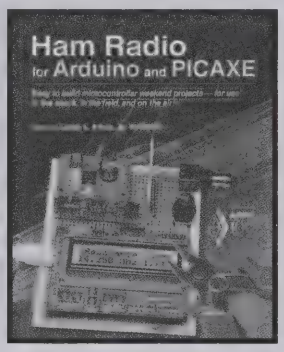

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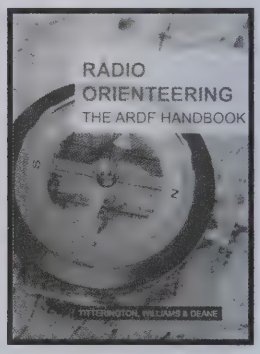

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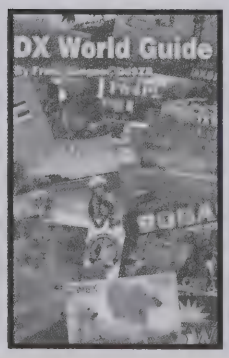

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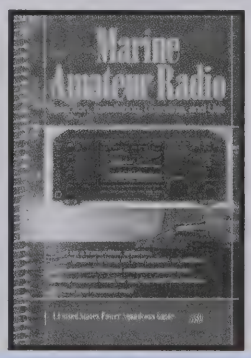

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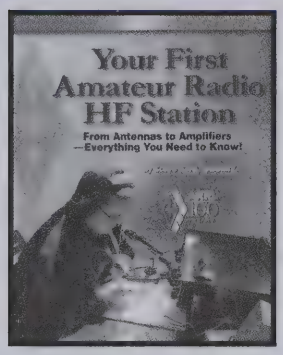

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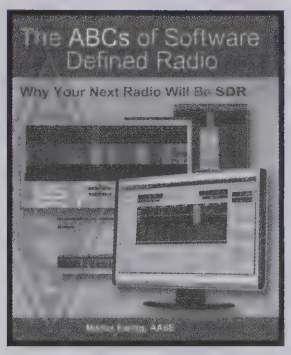

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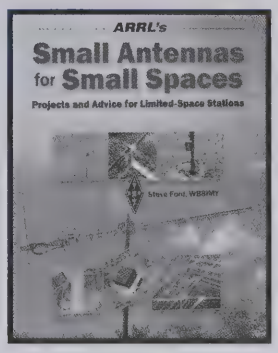

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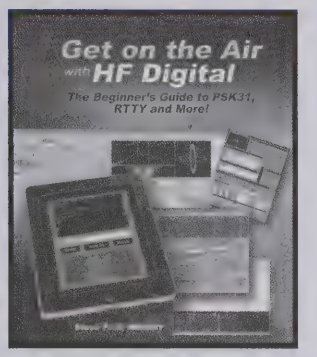

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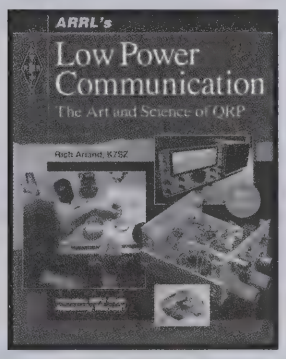

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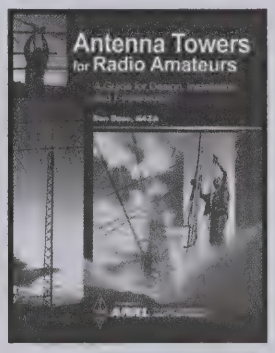

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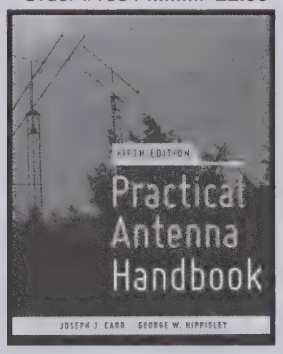

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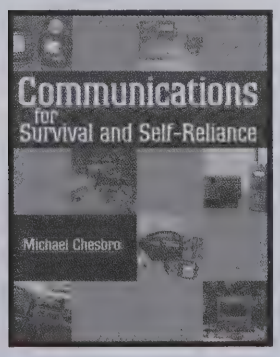

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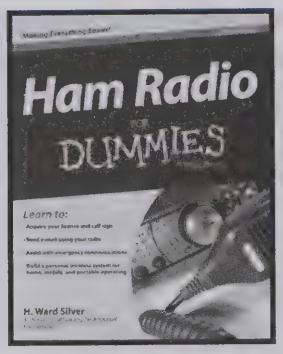

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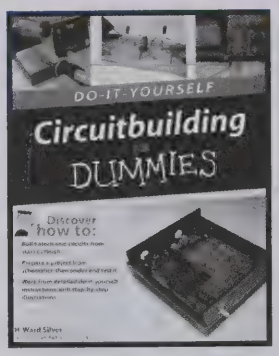

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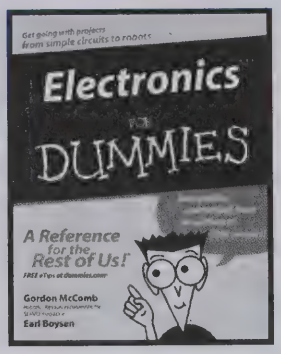

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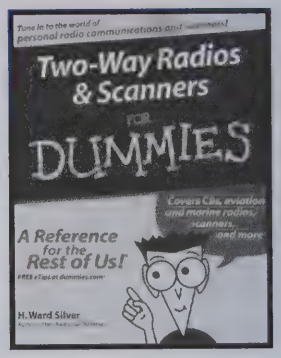

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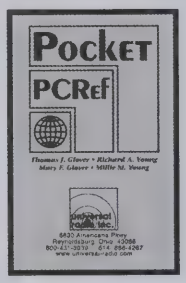

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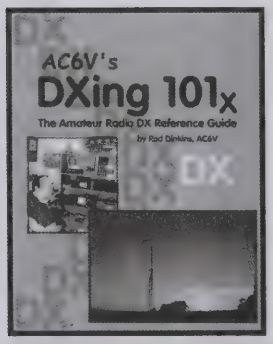

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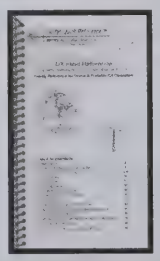

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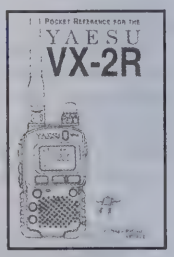

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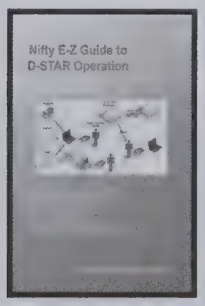

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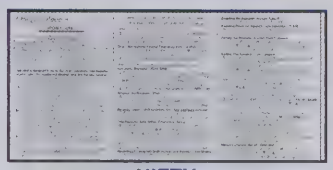

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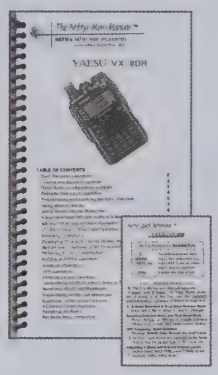

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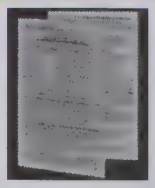

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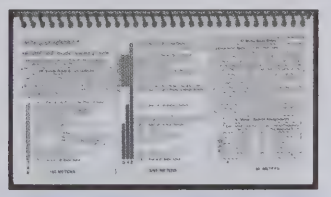

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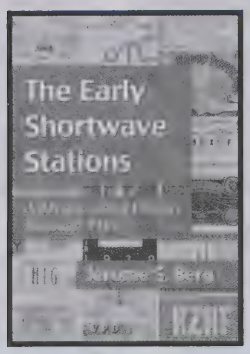

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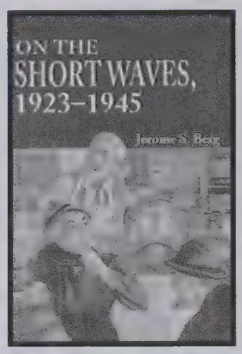

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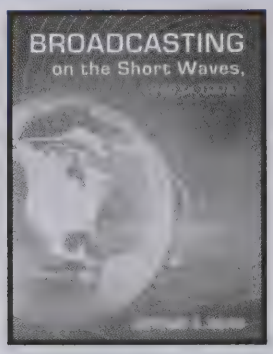

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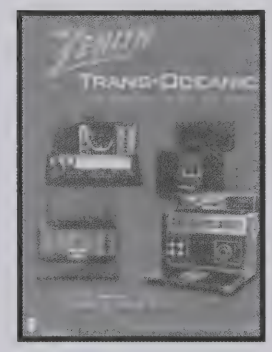

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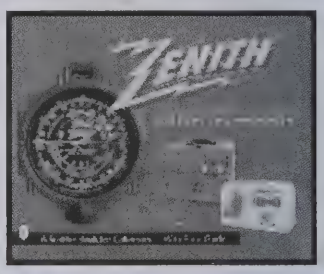

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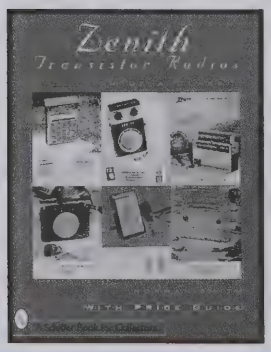

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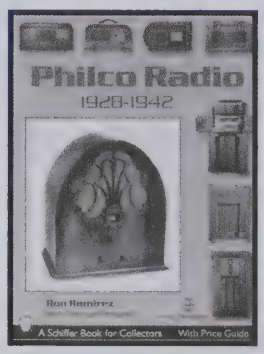

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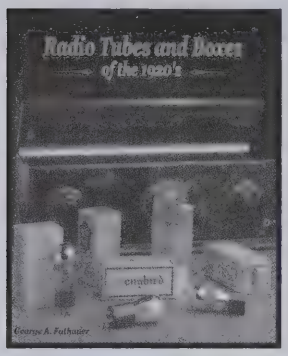

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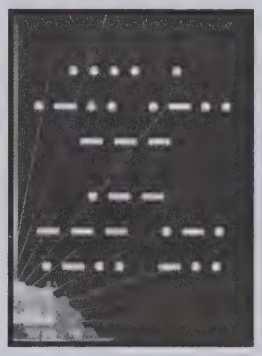

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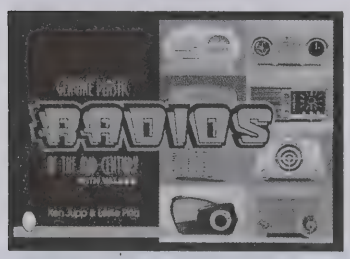

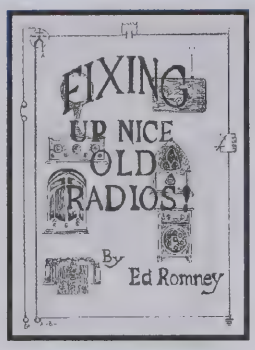

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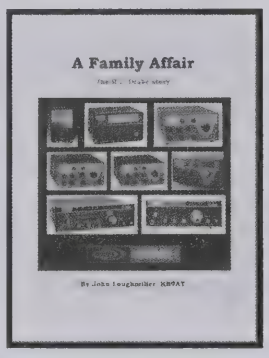

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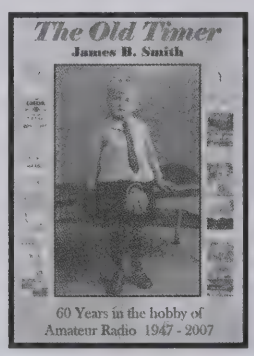

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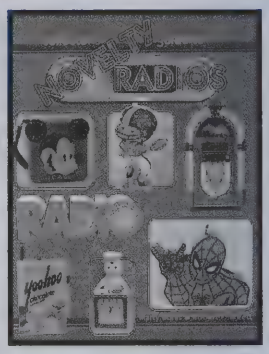

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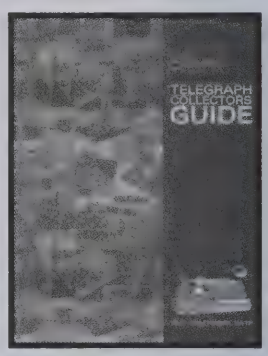

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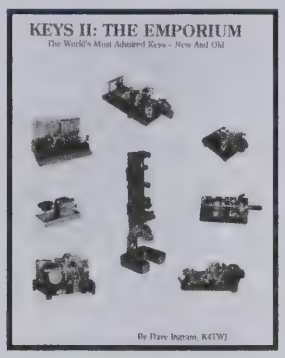

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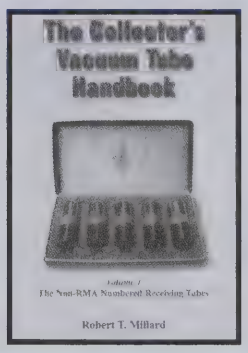

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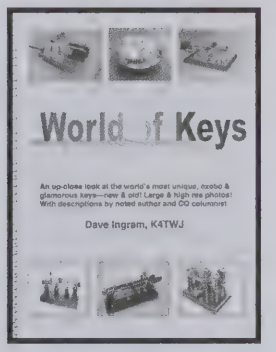

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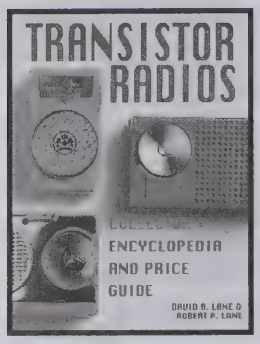

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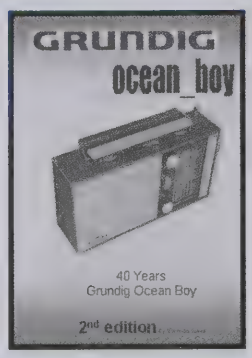

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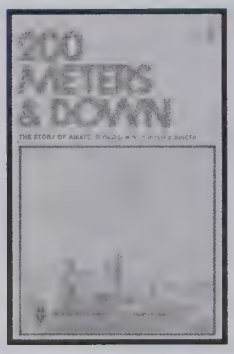

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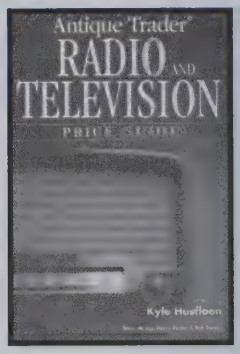

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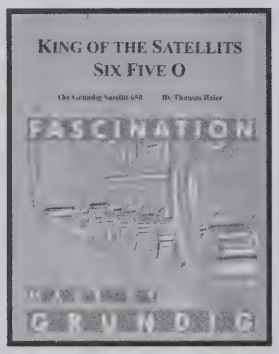

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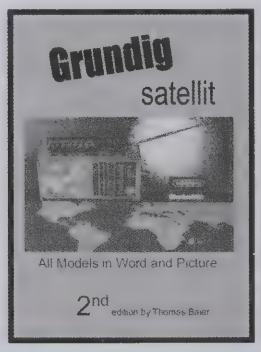

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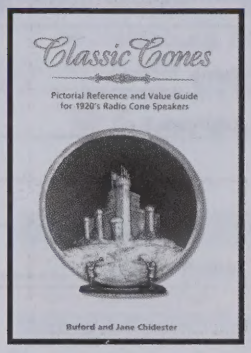

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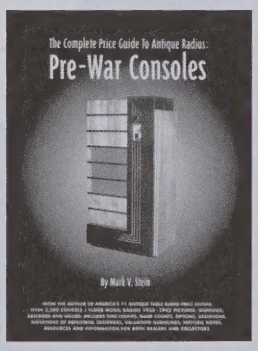

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